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The Role of Culture in Help-Seeking during Adolescence

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Psychology

by

Sisi Guo

2017

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ABSTRACT OF THE DISSERTATION

The Role of Culture in Help-Seeking during Adolescence

by

Sisi Guo

Doctor of Philosophy in Psychology

University of California, Los Angeles, 2017

Professor Anna Shan-Lai Chung, Chair

The notable disparity between need for and use of mental health services among youth, particularly ethnic minority adolescents, has prompted research on the barriers and facilitators to help-seeking. Although a number of practical, institutional and family factors have been shown to influence treatment utilization, there is a dearth of research on adolescent attitudes and behaviors toward help-seeking. Given that adolescence is a period marked by increasing autonomy and rising mental health needs – many of which go undetected by adult caregivers – youth perspectives are particularly important to consider in order to reduce disparities in mental health care. This dissertation used data from a large prospective study to examine predictors of support seeking behavior and intervention preferences in two ethnocultural groups (i.e., Vietnamese Americans and European Americans). Specifically, we examined how traditional indicators (i.e., race/ethnicity and perceived mental health need) interacted with adolescents' larger social and cultural environment (e.g., cultural values, social supports) to shape attitudes

and behaviors related to help-seeking. Study 1 sought to identify factors that influenced the recruitment of formal and informal support for mental health need. Findings showed that the positive link between mental health need and formal help-seeking was attenuated among Vietnamese Americans relative to European Americans, and among youth who endorse high family obligation values. Study 2 built upon Study 1 by assessing youth evaluations of help-seeking experiences once support had been obtained. Adolescents rated multiple sources of support as helpful in addressing their emotional difficulties, though satisfaction with received adult support was significantly lower than peer support for Vietnamese Americans. We also found that adolescents' helpfulness ratings varied depending on their cultural values and perceived social support from friends and family. While Study 2 explored youth attitudes toward support from formal and informal supports, Study 3 concentrated on adolescent preferences toward specific evidence-based interventions. Specifically, we examined factors that influenced preferences toward one of two preventive interventions for depression among a sample of adolescents with elevated internalizing symptoms. Findings showed that treatment preference was aligned with youth indicated risk factors and the cultural value of emotional restraint; adolescents who engaged in more avoidant coping and who valued the downregulation of emotional expression preferred a mindfulness-based intervention that teaches healthy engagement with thoughts and emotions. Conversely, adolescents who reported more family stressors preferred an intervention that targets interpersonal stress through the cultivation of communication and relationship skills. Taken together, the three studies in this dissertation underscored the importance of taking youth perspectives into consideration when examining barriers and facilitators in the help-seeking pathway. Adolescent help-seeking and treatment preferences were related to their cultural norms and values, source and availability of social

support, and risk profiles. To effectively engage youths in needed treatment, greater attention must be paid to how sociocultural factors interact with more traditional indicators such as race/ethnicity and perceived mental health need.

The dissertation of Sisi Guo is approved.

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DEDICATION

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GENERAL INTRODUCTION

Help-seeking is a central concept in the study of mental health service utilization. A burgeoning field of research examines help-seeking attitudes and behaviors, in part, to understand well-documented racial/ethnic disparities in use of mental health services. When it comes to youth mental health services, studies have generally focused on the explanatory power of practical challenges, institutional barriers, and cultural differences in ethnic minority parents' help-seeking responses. Although these studies have contributed greatly to our understanding of how racial/ethnic differences arise in formal help-seeking, they reveal little about the perspective and experience of adolescents, who are more autonomous in their decision-making than children and may be more cognizant of their mental health needs. This dissertation contains three studies that examined the contributions of race/ethnicity and cultural factors in understanding patterns of help-seeking, perceived benefit, and preferences for sources of help among Vietnamese American and European American adolescents.

Unmet Mental Health Need among Adolescents

Children undergo a series of biological, cognitive, social, and environmental changes as they transition from childhood into adolescence (Sheffield, Fiorenza, & Sofronoff, 2004). The second decade of life is also marked by an increasing number of stressful life events (Ge, Conger, & Elder Jr., 2001; Schonert-Reichl & Muller, 1996). Faced with these new challenges and demands, adolescents are at an increased risk for onset of a range of mental health problems. Studies show that general distress, anxiety disorders, delinquency, and substance abuse peak during adolescence (Gould et al., 2004; Keyes et al., 2014; Zahn-Waxler, Shirtcliff, & Marceau, 2008). Age of onset for major depression appears to be decreasing with risk of onset rising precipitously in adolescents in more recent birth cohorts (Kessler et al., 2003). Despite the

increase in mental health need, few adolescents seek or receive appropriate care. It is estimated that nearly 80% of youth who suffer from emotional or behavioral problems do not enter any form of treatment (Kataoka, Zhang, & Wells, 2002). Left untreated, these emotional and behavioral difficulties can interfere with attaining normative milestones of development and set the course for negative outcomes in adulthood (Cauce et al., 2002; Hofstra, Van der Ende, & Verhulst, 2002). Early interventions have the potential to prevent the progression of such illnesses. Youth who receive appropriate and timely treatment not only show improvement in their symptoms, but also incur less financial cost to society compared to those who do not receive such services (Patel, Flisher, Hetrick, & McGorry, 2007; McGorry, Purcell, Hickie & Jorm, 2007).

While adolescents generally evince a pattern of underutilization, use of mental health services is particularly low among racial and ethnic minority youth. Although ethnic minority youth have comparable levels of need as their European American peers, they have poorer access to care, experience greater delays to treatment, receive poorer quality of care, and are more likely to end treatment prematurely (Alegría et al., 2012; Cauce et al., 2002; McCabe, 2002; McMiller & Weisz, 1996). Such racial/ethnic differences in care persist even after accounting for factors such as problem severity, levels of adaptive functioning, insurance coverage, and socioeconomic status (Garland et al., 2005; Padgett, Patrick, Burns, & Schlesinger, 1994; Slade, 2004).

Vietnamese American youth are an ethnic minority group that has shown persistent underutilization but have received little attention from researchers (Luu, Leung, & Nash, 2009; Nguyen & Anderson, 2005). With immigration doubling in the last two decades, Vietnamese Americans represent one of the fastest growing ethnic minority groups (Fu & VanLandingham, 2012). Compared to other foreign-born groups, adolescents of Vietnamese descent have a unique

migration history as many of their parents are refugees who left their home country with little time or assistance to prepare for cultural changes in the United States. (Lam, 2005). In addition to their distinct immigration experience, Vietnamese Americans also face notable challenges upon arrival in the United States. Today, Vietnamese American families are considered one of the poorest ethnic minority groups in the country (Niedzwiecki & Duong, 2004; U.S. Census Bureau, 2007). Economic difficulties and neighborhood conditions such as crime and community violence are more common among Vietnamese American adolescents than other immigrant groups (Ho, 2008). Researchers examining the mental health need of Vietnamese American youth have found markedly high rates of psychological distress, particularly depression and behavioral problems (Chung, Bemak, & Wong, 2000; Lim, Stormshak, & Falkenstein, 2011). Yet, individuals of Vietnamese descent are among the lowest utilizers of mental health services (Kirmayer et al., 2007; Leong & Lau, 2001). The sharp disparity between need and use make Vietnamese American youth an important group to study to shed light on determinants of racial/ethnic disparities in care.

Help-seeking

Given the disparity between need and use of mental health services during adolescence and the importance of early intervention, it is vital to understand how young people, particularly ethnic minority youth such as Vietnamese Americans, seek and receive help. Help-seeking is generally understood as a search for assistance from external sources when mental health problems arise (Rickwood, Thomas, & Bradford, 2012), and is considered an adaptive coping strategy that is problem-focused, approach-oriented, and functional (Boldero & Fallon, 1995). In this dissertation, we distinguish help-seeking from the related construct of perceived social support, which refers to the perception and experience that one is cared for within a supportive

social network (Wills, 1991). The World Health Organization provides further clarification on the two constructs: help-seeking is conceived as the *demand for help* or social support, and social support is defined as the *supply of this help* (Barker, 2007).

Help can be sought from a wide range of support sources, including people who occupy different roles and who vary in terms of their relationship with the person who seeks help. These different sources fall along the broad dimensions of formal and informal support (Saunders, Resnick, Hoberman, & Blum, 1994). Formal supports are characterized by their high level of organization and are designed specifically to promote the welfare of the individual through some form of formal training (Cauce, Felner, & Primavera, 1982). Examples include mental health professionals, medical doctors, and school counselors. In contrast, informal supports tend to be more spontaneous and unstructured sources that the person seeking help would normally have close contact, such as parents, friends, and romantic partners. Numerous studies show that there are clear distinctions between the two dimensions of support (e.g., Schonert-Reichl, Offer & Howard, 2013; Gulliver, Griffith, Christensen, & Brewer, 2012). This distinction appears particularly important in the study of adolescents and ethnic minorities as use of formal mental health services is rarely the end result of help-seeking for these groups. Instead, adolescents, particularly ethnic minority youth, tend to seek help from more informal sources such as family and friends (Ashley & Foshee, 2005; Gould, Munfakh, Lubell, Kleinman, & Parker, 2002; Sullivan, Marshall, & Schonert-Reichl, 2002).

Although less studied, differences may also exist in determinants of the sources of informal support that may be sought, particularly between adult and peer sources of help. In part, this reflects the variation in help-seeking patterns for different types of problems. Whereas adolescents tend to turn to friends for help on relationship problems, they are more likely to seek

support from parents on personal problems, and from teachers on academic issues (Boldero & Fallon, 1995; Offer, Howard, Schonert, & Ostrov, 1991). Developmentally speaking, the distinction between adult and peer support is important given the changing roles of families and peers during adolescence (Collins & Laursen, 2004). Indeed, research shows that with age, informal help-seeking shifts increasingly from adults such as parents to peers (Arnett, 2003; Levitt et al., 2005). Further, the amount of perceived social support received from parents and peers also appears to change during adolescence (Frojd, Marttunen, Pelkonen, von der Pahlen, & Kaltiala-Heino, 2007)

Racial/ethnic Disparities in Formal Help-Seeking

The majority of research on help-seeking has concentrated on understanding patterns of reliance on formal mental health providers. One important predictor of formal help-seeking is perceived mental health need (e.g., Lau & Takeuchi, 2001; Zwaanswijk, Van der Ende, Verhaak, Bensing & Verhulst, 2003; Bergeron, Poirier, Fournier, Roberge & Barrette, 2005). Studies show that youth with greater severity of distress are more likely to receive treatment. However, epidemiological studies consistently show that while need is necessary, it is not sufficient to determine whether an adolescent seeks or receives treatment (e.g., Alegria, Vallas, & Pumariega, 2010; Alegría et al., 2012). Other variables must play a role in the help-seeking process for adolescents in general, and for ethnic minority youth in particular.

A number of practical and institutional barriers have been identified to explain racial/ethnic disparities in formal help-seeking. Compared to European Americans, immigrant and minority families such as Vietnamese Americans are more likely to encounter logistical access challenges such as lack of insurance coverage, transportation problems, poor availability of mental health services in the community, and limited supply of linguistically or culturally

appropriate providers (Garland et al., 2005; Kodjo & Auinger, 2004; Slade, 2004; Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). Institutional practices have also been shown to contribute to racial/ethnic differences in entry into formal care. Studies suggest that there are potential biases among gatekeepers (e.g., school counselors, teachers) in their recognition of mental health needs, resulting in under-referral of Asian American youth into services (Garland et al., 2005; Guo, Kataoka, Bear, & Lau, 2014; Guo, Kim, Bear, & Lau, in press).

Cultural barriers may also contribute to racial/ethnic disparities in formal help-seeking. Since adolescents typically do not seek treatment on their own but are directed to services by adult gatekeepers, researchers have primarily focused on how culture shapes problem recognition and help-seeking responses among parents and caregivers. Scholars contend that mental health decisions are embedded within the cultural context in which the parent and the child live. Indeed, cultural norms, values, and beliefs held by Asian American parents have been shown to contribute to poorer recognition of the youth's problem (Eiraldi, Mazzuca, Clarke, & Power, 2006; Roberts, Alegria, Roberts, & Chen, 2005), greater shame and stigma toward mental illness (Lau & Takeuchi, 2001), lower expectations that treatment will be helpful (Lau & Takeuchi, 2001), and tendency to hold explanatory beliefs that divert help-seeking from formal mental health support (Yeh et al., 2005; Yeh, Hough, McCabe, Lau, & Garland, 2004). Together, these cultural differences have led Asian Americans to rely more on their informal networks (e.g., family members) than on formal supports when mental health need arises (Leong & Lau, 2001).

The Dissertation

Thus far, explanations of racial/ethnic disparities in service use and help-seeking have concentrated on practical challenges, institutional barriers, and negative caregiver perceptions. Few studies have examined adolescent values and beliefs that may be relevant to understanding

their patterns of help-seeking. However, the youth perspective is important to consider given the notable social and emotional changes that occur during adolescence. During this transitional period, adolescents are gaining both behavioral and emotional autonomy from parents while simultaneously forming connections with others outside of the family such as friends and romantic partners (Collins & Steinberg, 2007). Adolescence is also a period where influence and interactions between the parent and child shift from asymmetrical and hierarchical to ones that are more equal and collaborative (Collins & Laursen, 2004). Together, the developmental changes that occur in the interpersonal context suggest that adolescents may hold increasingly distinct and meaningful attitudes and beliefs during decision-making processes that warrant greater attention from researchers.

In addition to developmental significance, the perspectives of youth are also important to consider as many mental health problems often go undetected by parents and other adult gatekeepers. Internalizing problems such as anxiety and mood disorders are among the most common mental disorders during adolescence (Costello, Egger, & Angold, 2005; O'Neil, Conner, & Kendall, 2011). Yet only a small fraction of those meeting diagnostic criteria receive any form of treatment, particularly among ethnic minority youth (Gudiño, Lau, & Hough, 2008). The rate of unmet need appears to be higher for youth with internalizing disorders relative to externalizing ones such as ADHD and conduct disorders, and this disparity is most pronounced among immigrant families (Gudiño, Lau, Yeh, McCabe, & Hough, 2008). Whereas externalizing problems are by nature more disruptive to others around the youth, internalizing problems are less noticeable even though they pose significant distress and impairment (Thompson, 2005). Given that certain mental health problems are less likely to be recognized by adult gatekeepers, it

is even more important to pay attention to youth help-seeking experience and the factors that shape such perceptions.

Indeed, some research has examined youth attitudes toward professional psychological help (e.g., Garland & Zigler, 1994; Komiya, Good, & Sherrod, 2000), intentions to seek treatment in the future (e.g., Carlton & Deane 2000; Wilson, Rickwood, & Deane, 2007), and actual help-seeking behavior (e.g., Boldero & Fallon, 1995; Zwaanswijk et al., 2002). However, most of the studies on adolescent help-seeking are based on predominantly Western populations. Little research has been conducted to examine racial/ethnic disparities in youth help-seeking. To address this limitation, we examined whether cultural norms and values contributed to differences in service utilization between ethnic minority youth (i.e., Vietnamese Americans) and racial majority youth (i.e., European Americans). In particular, we were interested in the values of interdependent self-construal, family obligation, and emotional restraint to explain adolescent help-seeking attitudes and behaviors. Our focus on culture as a potential explanatory factor of racial/ethnic disparities moves us beyond the two traditional predictors of help seeking: a) mental health need and b) race/ethnicity. We step away from using mental health need as the primary determinant of help-seeking given that perceived problem severity is rarely sufficient in determining whether youth seek or receive treatment. The use of race/ethnicity as a sole predictor of help-seeking also have its own set of challenges. In particular, cultural psychologists contend that racial and ethnic labels alone do not provide a thorough explanation for why differences may exist between different groups of individuals in a particular psychological phenomenon (Cokley, 2007). Based on the recommendations of Helms and colleagues (2005), we examined cultural norms and values in order to identify more proximal and specific determinants of any potential racial/ethnic disparities in help-seeking and service use. This

dissertation also improved upon some methodological constraints of previous research. Specifically, whereas past studies were largely cross-sectional or retrospective in design, the current study prospectively examined predictors of help-seeking behavior in an effort to establish temporal precedence.

This dissertation has three major aims: 1) to characterize use, beliefs, and preferences toward formal and informal support sources among Vietnamese American and European American youth, 2) to examine the utility of race/ethnicity, source and availability of social support, and cultural values in predicting individual differences in help-seeking, and 3) to determine whether adolescent mental health attitudes and behaviors are related to their indicated need. This dissertation contains three studies. Data come from the Adolescents Coping with Everyday Stress (ACES) study, a one-year prospective cohort design with three separate cohorts. The first study used cohort 1 data to examine adolescents' use of formal and informal support. Specifically, we assessed whether race/ethnicity and cultural values moderated the link between mental health need and types of help sought. This study has been published in the *Journal of Counseling Psychology*. The second study used data from all three cohorts of ACES to examine perceived helpfulness of different support sources as a function of youth race/ethnicity, cultural values, perceived social support, and types of support sought. The third study focused on youth preferences toward two empirically supported interventions for depression as a function of adolescents' race/ethnicity, cultural values, and risk factors. Data for the final study were drawn from cohort 3 of the ACES study.

STUDY 1

LINKAGES BETWEEN MENTAL HEALTH NEED AND HELP-SEEKING BEHAVIOR
AMONG ADOLESCENTS: MODERATING ROLE OF ETHNICITY AND CULTURAL
VALUES

Abstract

Risk of developing of emotional and behavioral mental health problems increases markedly during adolescence. Despite this increasing need, most adolescents, particularly ethnic minority youth, do not seek professional help. Informed by conceptual models of health behavior, the current study examined how cultural values are related to help-seeking among adolescents from two distinct racial/ethnic groups. In a prospective survey design, 169 10th and 11th grade Vietnamese American and European American youth reported on their mental health need, as measured by emotional/behavioral mental health symptoms and stressful life events, with participants reporting on their help-seeking behavior at 6-month follow-up assessments. Multinomial logistic regression analyses indicated that mental health need interacted with cultural values and ethnicity to predict help-seeking behavior. Specifically, associations between symptoms and stressful life events, and help-seeking behavior were smaller among Vietnamese American adolescents, and among adolescents with strong family obligation values. These results underscore the complex sociocultural factors influencing adolescents' help-seeking behavior, which have important implications for engaging youth in needed mental health care.

Keywords: help-seeking, adolescents, ethnic minority, family obligation, cultural values

Linkages between mental health need and help-seeking behavior among adolescents:
Moderating role of ethnicity and cultural values

The risk of developing a range of mental health problems increases markedly during adolescence, a period defined by the World Health Organization as the second decade of life (World Health Organization, 2001). However, most youth with need do not receive professional help (Wilson, Rickwood, & Deane, 2007) due to a variety of reasons, such as low mental health literacy, and stigma and embarrassment (Gulliver, Griffiths, & Christensen, 2010). Adolescents also may be deterred from seeking help by their strong need for privacy, increased desire for autonomy and self-reliance, and a fragile self-identity (Cauce et al., 2002). When young people do seek help, they tend to reach out to members of their informal social network with whom they are close, such as family and peers (Gulliver et al., 2010; Wilson et al., 2007) rather than seeking help from more formal sources (e.g., counselors; family physician). Given the gap between mental health need and service use during adolescence and the vital importance of early intervention, understanding factors that influence young people's help-seeking patterns is an important step toward reducing the burden of mental illness.

Two models used for understanding adolescents' help-seeking behaviors are the Andersen Behavioral Model (ABM) and the Theory of Reasoned Action (TRA). Both are based on the fundamental assumption that humans are rational decision makers, but each emphasizes a different aspect of the help-seeking process (c.f., Andersen & Davidson, 2007; Fishbein & Ajzen, 1975). The ABM focuses on predisposing, enabling, and need characteristics that influence individual health behaviors (Andersen & Davidson, 2007). Predisposing characteristics (e.g. demographic factors) increase or decrease the likelihood of individuals using health services, whereas enabling characteristics (e.g. resources and access to care) provide the means

for individuals to obtain care (Andersen, 1995). Need characteristics refer to individuals' assessment of the severity of their illness and their need for health care. Since the ABM was first introduced, a number of studies have found gender (Doherty & Kartalova-O'Doherty, 2010; Neighbors et al., 2007), ethnicity (Abe-Kim et al., 2007; Williams et al., 2007, Wang et al., 2005), and perceived need (Fleury, Ngui, Bamvita, Grenier, & Caron, 2014; Katz, Kessler, Frank, Leaf, & Lin, 1997) to be important determinants of help-seeking.

Although generally found to be useful for understanding help-seeking behavior, one limitation of the ABM is that it does not directly provide for a description of the influences of cultural norms on help-seeking. The Theory of Reasoned Action (TRA) does provide such a perspective for integrating cultural influences on help-seeking (Park & Levine, 1999). According to the TRA, individuals' attitudes and subjective norms about (help-seeking) behavior influence their intention to perform the behavior, which in turn influences actual behavior (Fishbein & Ajzen, 1975). Through its focus on norms regarding behaviors and attitudes, the TRA suggests a direct linkage between cultural beliefs and values, and an individual's intentions and help-seeking behaviors. Indeed, variables such as acculturation (Le Meyer, Zane, Cho, & Takeuchi, 2009), stigma tolerance (Ting & Hwang, 2009), and interdependent self-construal (Shea & Yeh, 2008) have been found to play an important role in the seeking of professional services.

The growing interest on identifying predictors of help-seeking such as culture is important, given the persistent racial/ethnic disparities in use of mental health services that have been identified (Department of Health and Human Services, 2001). One group that continues to under-utilize mental health services but has received relatively little research attention is Vietnamese Americans (Luu, Leung, & Nash, 2009; Nguyen & Anderson, 2005). Vietnamese Americans were one of the primary Southeast Asian refugee groups that settled in the U.S.

following the end of the Vietnam War in 1975 (Zhou & Bankston, 1998). Consequently, mental health need among Vietnamese American adolescents is closely intertwined with the experiences of their parents as refugees. Intergenerational conflict, negotiating cultural identities, and the pressure of academic achievement are salient stressors for Vietnamese American youth (Ho, 2010). Research on Vietnamese American mental health has focused on documenting the prevalence of mental health needs (e.g. Birman & Tran, 2008; Ngo, Tran, Gibbons, & Oliver, 2001; Tran, 1993) and attitudes around help-seeking (e.g. Luu et al., 2009; Nguyen & Anderson, 2005; Lien, 1993). However, few studies have examined actual mental health help-seeking in this group (e.g. Abe-Kim et al., 2007; Steel et al., 2004; Phan, 2000), and to the best of our knowledge, no research has examined the influences of cultural values on actual help-seeking behaviors of Vietnamese American adolescents, which may play a central role in help-seeking decisions.

More generally, one specific cultural factor that may influence help-seeking is attitudes and beliefs about emotional restraint. Although used by most cultural groups (e.g., Gross & Thompson, 2007), the degree to which self-control over emotions is valued by different groups varies. For instance, in interdependent cultural groups such as Vietnamese Americans, in part because group concerns are weighted relatively more strongly than individual concerns, individuals are socialized to exercise restraint over the expression of strong emotions, especially negative valence emotions (Friedlmeier, Corapci, & Cole, 2011; Louie, Oh, & Lau, 2013). Individuals seek to maintain the group harmony through emotional restraint, rather than actively exert influence on the environment to fit their needs through emotional expression (Markus & Kitayama, 1991; Tsai et al., 2006); this may include not burdening others by seeking help or comfort (Kim & Omizo, 2003). Considerable evidence indicates that Asian Americans who

value interdependence are less likely to seek support from friends and family in the face of distressing life circumstances (Kim, Sherman, & Taylor, 2008; Taylor et al., 2004; Wang, Shih, Hu, Louie, & Lau, 2010). Professional help is seen as a last resort and not likely to be sought (Kim & Omizo, 2003; Shea & Yeh, 2008).

In contrast, in independent cultures that emphasize the value of the individual and one's own self-interest, emotions and their expression take on relatively greater intrapersonal value (Matsumoto, Yoo, & Fontaine, 2008). Emphasis is placed on the ability to assert oneself and gain autonomy, and open expression of emotions is encouraged in most situations as a way to assert the importance of individual needs (Markus & Kitayama, 1991). Cross-cultural research has found that individuals from independent cultures value emotion expression more than individuals from interdependent cultures (Matsumoto et al., 2008), and emotion suppression is used less often among individuals holding independent values relative to those holding more interdependent values (Butler, Lee, & Gross, 2007). Together, these findings suggest that attitudes and beliefs about the importance of emotion restraint vary as a part of cultural norms, with interdependent and independent cultures operating as opposing ends of a continuum.

Family obligation is another value that is strongly socialized among interdependent cultural groups that may influence help-seeking. For instance, it has been found that adolescents from families recently immigrated to the U.S. (who tend to be interdependent culturally; Phinney, Ong & Madden, 2000) tend to place more emphasis on helping, respecting, and contributing to one's family than European American youth (Fuligni, Tseng, & Lam, 1999; Telzer & Fuligni, 2009). Family obligation can include focusing on academic achievement as a means for the youth to honor and repay their parents' sacrifices, providing the youth with a sense of having fulfilled their role within the family (Fuligni & Witkow, 2004). In regards to help-

seeking, individuals with a strong sense of family obligation may be less likely to seek support or help for personal concerns, as this could be perceived as placing one's own needs over those of the family, or burdening their family with their troubles (Telzer & Fuligni, 2009). Taylor and colleagues (2004) found that decreased support seeking among Asian Americans relative to European Americans was linked in part to concerns about burdening or stressing personal relationships. Similar to emotional restraint, family obligation appears to operate along a continuum, with interdependent groups having higher value orientation and independent groups having lower value orientation (Fuligni et al., 1999).

Although other cultural constructs may play a role in mental health help-seeking, the present study focused on emotional restraint and family obligation because of their developmental relevance. Adolescence is a period during which hormonal, neural, and cognitive systems underlying emotion regulation are maturing (Silk, Steinberg, & Morris, 2003), and thus adolescents' beliefs about emotion expression may be a particularly important predictor of help-seeking during this period of developmental change. Similarly, adolescence is a period marked by increased autonomy from the family and involvement with peers, and thus attitudes and beliefs toward their family may be of particular relevance during this shifting social environment (Fuligni et al., 1999).

The goal of the present study was to examine factors that potentially influence the help-seeking behavior of Vietnamese American and European American adolescents, two groups with significantly different cultures (e.g. Phinney & Ong, 2002). We focused on the most intensive source of help (e.g., peers, adults, or formal providers) sought by adolescents for mental health related problems. Based on the structure of the Andersen Behavioral Model (ABM), we examined as predictors of help-seeking predisposing or demographic characteristics and

perceived mental health need. We were interested specifically in ethnicity as a predisposing characteristic of help-seeking but also included gender as a control variable to account for help-seeking differences commonly found between male and female youths (e.g., Sen, 2004; Chandra & Minkovitz, 2006). In the current study, perceived mental health need was defined by severity of mental health symptoms and exposure to stressful life events in the family, peer, and academic domains. To reflect the larger influences of subjective norms as outlined in the TRA, we examined beliefs about emotional restraint and family obligation as two prominent cultural determinants of help-seeking patterns. Lastly, we explored whether race/ethnicity moderated the association between need and help-seeking and if so, could cultural characteristics explain such racial/ethnic differences? Through examination of cultural beliefs and values as predictors of help-seeking, the current study aimed to identify more culturally proximal explanations of potential racial/ethnic differences, which is important given the limitations in the use of race and ethnicity as an explanatory construct (Cokley, 2007; Helms, Jernigan, & Mascher, 2005). Further, whereas previous studies have treated ABM and TRA models as additive and tested only main effects of model-related variables on health-related behaviors (Poss, 2001), we theorized that these variables may interact and shape the effect of one another on help-seeking behavior.

We hypothesized that being (a) European American, and (b) having greater levels of emotional/behavioral symptoms and stressful life events would be associated with a higher likelihood of seeking help from formal sources versus not seeking help (from any source). Based on the logic of the Theory of Reasoned Action (TRA), we hypothesized that cultural values (norms and attitudes within the larger cultural context) would predict help-seeking behavior above and beyond effects of predisposing characteristics and individual need. Specifically, we

predicted a negative effect of emotional restraint and family obligation values on help-seeking in general, and formal help-seeking in particular. Given the well-documented racial/ethnic disparity in mental health service utilization (e.g., Garland et al., 2005), we hypothesized that the relation between indicators of mental health need and help-seeking would vary by race/ethnicity, with a smaller positive relation between need and formal help-seeking among Vietnamese American adolescents than European American adolescents. We also hypothesized that family obligation and emotion restraint values would function as moderators, reducing the magnitude of the positive relation between need and help-seeking. Finally, we assessed whether the cultural variables might act as mediators in the association between race/ethnicity and help-seeking, hypothesizing that Vietnamese ethnicity would predict higher orientation toward family obligation and emotional restraint, which in turn would predict lower likelihood of seeking support.

Method

Participants and Procedures

The present sample was part of a larger study examining cultural variation in stress experiences, coping, and mental health among Vietnamese American and European American 10th and 11th grade students. The four schools from which the current sample was recruited were ethnically diverse, with over three-fourth of enrolled students from ethnic minority groups, serving mixed lower- and middle-income communities with the percent of students qualifying for a free or reduced cost lunch ranging from 15.2% to 73.1%. Two of the schools were designated as Title I eligible.

Recruitment and sampling included three stages during the 2011-2012 academic school year. First, research assistants made brief announcements in all 10th and 11th grade classrooms in

a given department (e.g., Social Studies; Science) to describe the study and distribute consent packets. Students were asked to return the packets with a signed parental consent form if they were interested in participating in the study. Small incentives (e.g., key chains, stress balls, snacks) were provided to individual students who returned forms irrespective of whether they were interested in participating in the project or not and to classrooms with the highest return rates. Return rates for the consent packets ranged from 30.3% to 37.3% across the schools, and among those who returned consent packets 12.1% declined participation. In schools with smaller numbers of eligible students, targeted recruitment via email was used. Second, a stratified random sample was selected from among those who provided parental consent to maximize the gender and ethnicity balance in the Time 1 (T1) survey. This resulted in a sample of 427 students with a mean age of 15.6 years ($SD = .61$) who completed the T1 survey in small groups at the school. Among the T1 survey group, 42.2% were male and 70.5% were Vietnamese American, and 29.5% were European American.

Third, from among the 427 students who completed the survey, 209 participants were selected for the two follow-up assessments. Given the high percentage of female and Vietnamese American students in the original sample, researchers invited all male and European American students to participate in the follow-up assessments in order to balance gender and ethnicity distribution in the prospective sample. Among female and Vietnamese American students in the baseline survey, we stratified our sample across low and high scores on the life events checklist to participate in follow-up assessments. T2 and T3 surveys were completed 3 and 6 months after the initial assessment. Of the 209 students who were followed prospectively, 187 completed assessment at T2 (10.5% attrition from T1), and 169 completed assessment at T3 (9.6% attrition from T2). Students received \$20 and \$25 retail gift cards for participation in the first and each of

the follow-up assessments, respectively. In the current study, the longitudinal sample of 169 students was used. Of these participants, 58.6% (n= 99) were Vietnamese American and 41.4% (n=70) were European American, and 46.2% (n=78) were male.

Measures

Emotional/Behavioral Symptoms. Emotional and behavioral symptoms were assessed using the Youth Self Report at T1 (YSR; Achenbach & Rescorla, 2001). The YSR measures internalizing and externalizing psychopathology, with 112 items covering a range of emotional and behavioral problems (as well as several positive distractor items). Adolescents rate each item on a 0 (“not true”), 1 (“somewhat or sometimes true”), or 2 (“very true or often true”) Likert scale for symptoms over the past three months. In the current study, we used the YSR Total Problems T-score as an indicator of total emotional/behavioral symptoms. The YSR has shown good reliability and discriminative validity across a wide range of cultural groups (e.g., Groot, Koot, & Verhulst, 1996), including adolescents of Vietnamese descent (Chiu & Ring, 1998). Internal consistency for the current sample was high (overall sample: $\alpha = .89$; European Americans: $\alpha = .87$; Vietnamese Americans: $\alpha = .89$).

Stressful Life Events. Exposure to stressful life events as a source of mental health need was measured at T1, using a revised version of the Adolescent Life Events Questionnaire (ALEQ; Hankin & Abramson, 2002). This version of the ALEQ assesses the occurrence of 70 negative life events, including academic/achievement problems (e.g., “you didn’t make the honors roll when you wanted to”), friendship difficulties (e.g., “you had an argument with a close friend”), and family problems (e.g., “your parents put you down”). Counts of events in each of these three domains were used as an indicator of mental health need (Bird et al., 1996). The ALEQ has been found to be a reliable and valid measure, including among Asian

adolescents (Cohen et al., 2013). For these scales, we did not compute internal consistency estimates. Life event scales often have been conceptualized as representing formative rather than reflective factors (e.g., Miller, 1989), which means that scale items are not indicators of a latent factor but rather are combined to create a formative factor. High correlations between items of a formative scale generally are not expected, and thus Cronbach' alpha may be misleading as indicator of reliability (Bollen, 1989).

Family obligation values. At T1 the Adolescents' Attitudes toward Family Obligation scale was used to measure the adolescents' sense of family obligation (Fuligni et al., 1999). The measure assesses attitudes about the family associated with interdependent cultural contexts in several domains. The *Current Assistance* domain assesses the frequency with which adolescents assist their families with household tasks (e.g., "help take care of your brothers and sisters"). The *Respect* domain assesses the extent to which the adolescents respect and follow the wishes of family elders (e.g., "show great respect for your parents"). The *Future Support* domain assesses obligation to support the family in the future (e.g., "help your parents financially in the future"). In the present study the total score was used to measure family obligation (overall sample: $\alpha = .78$; European Americans: $\alpha = .73$; Vietnamese Americans: $\alpha = .78$). The Family Obligation scale shows good reliability and validity with Asian American and European American adolescents (Fuligni et al., 1999).

Emotional restraint values. Emotional restraint was assessed at T1 using the 6-item Emotional Restraint scale. The Emotional Restraint (ER) scale was developed for the present study based on a literature review and on the Emotional Self-Control subscale of the Asian American Values Scale-Multidimensional (AAVS-M; Kim, Li, & Ng, 2005), which has demonstrated reliability and validity for both European American and Asian American samples

(e.g., Park & Kim, 2008). In the ER scale, participants are asked to rate on a 6-point Likert scale how much they agree or disagree with a series of statements describing restraint in emotional expression (e.g., “Showing emotion is a sign of weakness”). A principal axis exploratory factor analysis indicated that a single factor underlay the six-item scale. The construct validity of the ER was assessed by assessing relations with avoidant coping, which is conceptually related to emotional restraint (Kashdan, Barrios, Forsyth, & Steger, 2006). We found significant positive relations between the ER scale and the Children’s Coping Strategies Checklist (Ayers, Sandier, West, & Roosa, 1996), for the overall sample ($r = .53$), European Americans ($r = .61$) and Vietnamese Americans ($r = .45$); all $p < .001$. Internal consistency estimates for the current sample were satisfactory, for the overall sample ($\alpha = .73$), European Americans ($\alpha = .81$), and Vietnamese Americans ($\alpha = .65$).

Help-seeking behavior. Participants completed a modified version of the General Help-Seeking Questionnaire (GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2007) at T3 (6-month follow-up)¹. In the modified questionnaire, adolescents’ past year help-seeking behavior were assessed. Specifically, students were asked to endorse whether they have sought help from a list of potential support sources using a binary scale of “yes” or “no”. Potential support sources included a friend, significant other, parents, teacher, mental health professional (e.g., counselor, psychologist, and social worker), doctor, and religious/spiritual leader. Past research has shown that the GHSQ is reliable and valid for a range of youth, including adolescents of Asian descent (Moran, 2007). In the current study, an exploratory factor analysis identified three factors from the list of support sources: formal provider (medical or mental health professionals), adult (parent, teacher or spiritual leader), and peer (significant other or friend). Based on these results and our a priori focus on the relative intensity of these different sources of support, we

constructed a 4-level multinomial outcome variable (GHSQ-4) reflecting the most intensive level of help sought: (1) no support sought, (2) peer support (i.e., sought support from peers but no one else), (3) adult support (i.e., sought help from adults but not formal professional help), and (4) formal support (regardless of whether adult or peer support was sought). Thus, each participant was categorized into 1 of the 4 levels of highest level of intensity support sought. This multinomial classification allowed us to make meaningful distinctions between types of help-seeking that vary in intensity.

Analyses

We used multinomial logistic regression to examine the effects of the ethnicity, mental health need, and cultural values on intensity of help-seeking (i.e., the GHSQ-4 help-seeking variable collected at T3). Three log odds ratios were computed from the GHSQ-4 with “no support” as the reference category. We hierarchically tested sets of predictors: (a) demographic variables (ethnicity, gender) as base control variables; (b) mental health need (i.e., emotional/behavioral symptoms, family, academic and peer stressful life events) at T1; and (c) cultural values (emotional restraint and family obligation values) at T1. To assess moderation effects we ran two separate models that included (d) interaction terms. The interaction models tested two sets of interaction terms: (a) ethnicity X emotional / behavioral symptoms and (b) ethnicity X peer stressful life events, ethnicity X family stressful life events, ethnicity X academic stressful life events. Given the conceptual challenges of assessing ethnic effects based on participants’ self-identification (Cokley, 2007; Helms et al., 2005), we assessed effects of the cultural variables as factors underlying potential racial/ethnic differences in help-seeking using two different approaches. First, ethnicity was replaced in separate sets of models with the two cultural values variables as potential moderators: (c1) emotion restraint X emotional/behavioral

symptoms, (c2) family obligation X emotional/behavioral symptoms; and (d1a) emotion restraint X peer stressful life events, (d1b) emotion restraint X family stressful life events, (d1c) emotion restraint X academic stressful events, (d2a) family obligation X peer stressful events, (d2b) family obligation X family stressful events, (d2c) family obligation X academic stressful events.

A second approach used to identify cultural factors underlying potential racial/ethnic differences was tests of mediation, with family obligation and emotional restraint entered as potential mediators of the association between ethnicity and help sources. Given that there are no established statistical techniques for the treatment of indirect effects when the dependent variable is multinomial, we converted our dependent variable GHSQ-4 to two separate binomial variables in order to retain the entire sample: a) formal support vs. all other supports (i.e., adult, peer, and no support), and b) formal and adult support vs. peer and no support. Comparison of more intensive supports with lower supports ensured there is sufficient power to detect significant results in mediation. All mediation analyses were conducted using 5000 bootstrap samples to estimate the confidence intervals for the indirect effects of family obligation and emotional restraint (Preacher & Hayes, 2004).

All predictor variables were mean-centered prior to computing cross-products to reduce multi-collinearity (Jaccard, Wan, & Turrisi, 1990). To compare the fit of the different models in the hierarchical multinomial logistic regression, we used two model-selection statistics. The first was Akaike's Information Criterion (AIC) (Akaike, 1987). A model with a lower AIC is considered more plausible than one with a higher AIC. The second model-selection statistic was the chi-square difference (likelihood ratio) test (Bentler & Bonett, 1980). A significant chi-square difference test suggests the constraints of the more restricted model may be too stringent. Listwise deletion of missing data was used in inferential analyses, with 3 (2%) to 5 (3%)

participants dropped.

Results

Preliminary Analyses

Figure 1 presents the raw (i.e., not the highest level of support) percentages of students who sought help from a friend, significant other, parent, teacher, spiritual leader, doctor, mental health professional, or no one earlier during the academic year. In Table 1, these percentages were converted into the four mutually exclusive categories of the highest intensity of help sought: (1) no support, (2) peer support, (3) adult support, or (4) formal support. Across the total sample of 169 youths, (1) 11% reported seeking help from no one, (2) 30% reported peer support as the highest intensity of help sought, (3) 50% reported adult support was the highest intensity of help sought, and (4) 7% sought formal support.

Vietnamese American students had significantly higher levels of mental health need compared to European Americans; i.e., they reported significantly higher levels of emotional/behavioral symptoms, and significantly more stressful life events in all three stressful life event domains (family, peer, academic) relative to European Americans (see Table 1). Vietnamese American students reported significantly higher levels of family obligation than European Americans but the two groups did not differ significantly in regards to emotion restraint values.

Predictors of Help-seeking Behavior

In the first step of the multinomial logistic regression analyses, we entered the demographic and background variables into the model, with help-seeking behavior as the dependent variable. The demographic factors accounted for 6% of variability in the dependent variable (pseudo $R^2 = .06$). The likelihood ratio test indicated that inclusion of the demographic

characteristics significantly improved the model fit relative to the null model, $\chi^2(6) = 23.54$, $p < .001$. Next, we examined the extent to which mental health need incrementally predicted help-seeking, beyond effects of the demographic variables. The second model accounted for 16% of variability in help-seeking sources (pseudo $R^2 = .16$). The likelihood ratio test indicated that the mental health need variables significantly increased model fit, $\chi^2(12) = 37.09$, $p < .001$. In the third step of the model, we assessed the incremental value of the cultural values. This model accounted for 18% variability in help-seeking sources (pseudo $R^2 = .18$) but this third model did not provide a significantly improved fit relative to the previous model. Model statistics are shown in Table 2.

Table 2 also reports the effects of individual factors (e.g., ethnicity, within the demographic variables) on the individual logits (e.g., no help vs. formal help). European American adolescents and adolescents with a higher number of academic stressful life events were more likely to seek help from formal sources. Females were more likely than males to seek support from formal providers, adults, and peers, supporting the inclusion of gender as a covariate in the models. Neither family obligation nor emotional restraint were significantly associated as main effects with help-seeking behaviors.

We next tested whether ethnicity moderated the effect of the mental health need indicators (with emotional/behavioral symptoms, and stressful life events evaluated in separate models) on help-seeking behavior. As shown in Table 3, two interaction effects were significant in these analyses. First, ethnicity interacted with emotional/behavioral symptoms to predict formal help-seeking. As YSR Total Problems increased from low to high levels, the probability that European American but not Vietnamese American adolescents sought formal help increased substantially (see Figure 2a). Second, the ethnicity by family stressful life events interaction

predicted formal help-seeking, with the pattern of the interaction similar to that of the Ethnicity X Emotional/behavioral Symptoms interaction: As the number of family stressful life events increased from low to high levels, European American but not Vietnamese American youth were more likely to seek help from a medical or mental health professional (see Figure 2b).

When we replaced ethnicity with cultural values as moderator in the association between need and help-seeking, only one interaction term was significant across the two models (Models 3 and 4 in Table 3). Family obligation values moderated the effect of negative family stressful events on formal help-seeking versus no help. As shown in Figure 2c, as levels of family stress rose from low to high, the likelihood of seeking help from formal sources increased among adolescents with lower levels of family obligation (i.e., one standard deviation below the mean of family obligation scores). However, adolescents with high levels (i.e., one standard deviation above the mean) of family obligation values did not show increased formal help-seeking as a function of family stress.

We also assessed the extent to which potential cultural factors were responsible for racial/ethnic differences by conducting mediational analyses. However, controlling for gender and mental health need, neither family obligation nor emotional restraint measured at T1 were significant mediators in the link between ethnicity and each of the two help-seeking outcomes: a) formal vs. all other supports (Family Obligation: Indirect effect = .061, Bootstrapped SE = 1.13, 95% CI = -1.61 – 3.20; Emotional Restraint: Indirect effect = .012, Bootstrapped SE = .23, 95% CI = -.33 - .66), and b) formal and adult support vs. peer and no support (Family Obligation: Indirect effect = .25, Bootstrapped SE = .16, 95% CI = -.02 – .60; Emotional Restraint: Indirect effect = -.005, Bootstrapped SE = .062, 95% CI = -.17– .09).

Discussion

The central finding from our study is that, as has been found with a number of other Asian American groups (e.g., Cummings & Druss, 2011), there is a mental health help-seeking disparity for Vietnamese American versus European American adolescents. The probability of seeking formal help (e.g., from a counselor) versus no help was significantly lower for the Vietnamese American than European American adolescents (Table 2). Other of our results indicate that this reduced receipt of formal sources of mental health support was not due simply to a lower mental health need, as the Vietnamese American adolescents showed significantly higher mental health need across all four indicators of this construct (i.e., emotional and behavioral problems, and stressful life events); this suggests that other factors differentiating the groups are responsible for these effects. Past studies of mental health service usage disparity (e.g., Department of Health and Human Services, 2001) have found similar results on formal help seeking but our results also suggest that this disparity may not be as substantial in relation to other sources of mental health support. A key question is the extent to which these other, less formal sources of support are useful for addressing the adolescents' mental health challenges.

From a public health perspective, as health needs increase service usage should increase, so as to most efficiently support population health (Boylan, 2007). We found that European American but not Vietnamese American adolescents followed this pattern: As the level of mental health need increased (as assessed by self-reports of emotional and behavioral problems, and family stressful life events) above the mean, the probability of European American but not Vietnamese American adolescents seeking formal mental health support increased (Figures 2a, 2b). Other of our results suggest some of the cultural factors that may underlie these results. Across the two ethnic groups, we found that there was a significant interaction between adolescents' reports of family obligation, and the effects of family life events: As the frequency

of family stressful life events increased above the mean, for adolescents low on family obligation but not for adolescents high on family obligation the probability of seeking formal mental health support increased. This suggests that their sense of family obligation may have prevented these adolescents from seeking help from formal sources. The fact that Vietnamese American adolescents were significantly higher on family obligation than European American adolescents suggests this family obligation may be one factor underlying the Vietnamese American and European American differences in response to increased mental health need. It is interesting to note, and supports the validity of this interpretation, that it was only family-related stressful life events and not peer- or academic-related stressful life events that showed this pattern.

The raw frequencies (i.e., not converted to logits) of sources also provide an interesting perspective. Whereas approximately 17% of European American adolescents had peers as their highest intensity of support sought versus 61% had adults as the highest intensity support, for Vietnamese American adolescents about 39% had peers as their highest level of support versus 43% had adults as the highest level of support (see Table 1). One way of conceptualizing this result is that Vietnamese American adolescents are more likely to “stop” at the peer level of support than European American adolescents, but do not differ overall in help-seeking (i.e., the rates of No Help-seeking did not differ significantly between the two ethnic groups).

The fact that the only indicator of mental health need found to be a significant predictor of formal help seeking relative to not seeking any help was academic stressful events is consistent with previous studies that have found a strong link between academic problems and referral and entrance into formal mental health care (Guo, Kataoka, Bear, & Lau, 2014; Zwaanswijk, Verhaak, Bensing, Ende, & Verhulst, 2003). Interestingly, family stress was not a significant predictor of formal help-seeking despite the high levels of family-related stressful

events reported by youth. This finding is somewhat at odds with previous research that highlighted the prominent effect of family conflict and parental burden on children's mental health service use (e.g., Logan & King, 2001). However, it is important to note that family conflict and burden in those studies were based on parent report, whereas the current one relied on youth's self-report. Given that adults are often the gatekeepers to providing consent and funding for youths to access mental health services, adolescents' experience of family stress may not hold the same predictive power as parents' recognition of family stress.

Neither family obligation nor emotional restraint values were significant main effect predictors of help-seeking. Although these findings are inconsistent with our hypothesis of main effects of cultural values, it is in line with the emerging body of research on the complex nature of help-seeking processes. Cauce and colleagues (2002) point out that there is a dynamic interaction between characteristics of the larger social environment and individual mental health problems and concerns. Indeed, there were significant interaction effects identified in our study. First, ethnicity moderated the positive association between indicators of mental health need and formal help-seeking. As stressful life events or symptoms increased, European Americans' likelihood of seeking help from medical or mental health professionals increased whereas Vietnamese Americans' likelihood remained low. Such patterns of behavior is of concern given that Vietnamese American youth reported consistently higher level of need relative to European Americans. Once believed to be the model minority with few adjustment problems, Asian American youth such as Vietnamese Americans have been identified as a vulnerable group with high level of unmet mental health need (e.g., Guo et al., 2014; Ting & Hwang, 2009). This finding highlights a common concern in mental health disparities, that need alone does not explain help-seeking for particular cultural groups. Specifically, for ethnic minority and

immigrant youth, indices of need are less strongly related to receipt of care than for European American and U.S.-born families (Gudiño, Martinez, & Lau, 2012).

To better understand what underlies the help-seeking behaviors in these two ethnic groups, we examined how cultural values were related to help-seeking. Contrary to our hypothesis, family obligation and emotional restraint orientations did not mediate the association between race/ethnicity and help-seeking. European and Vietnamese American youth may have differed along other cultural values that in turn affected help-seeking, such as stigma tolerance (Ting & Hwang, 2009) and beliefs about mental illness (Nguyen & Anderson, 2005). Future studies may wish to explore the explanatory power of these variables for adolescents.

Although cultural characteristics did not explain ethnic differences in help-seeking, they were involved in the link between mental health need and help-seeking. In particular, family obligation attenuated the effect of family stress on formal help-seeking. The few studies on family obligation thus far have found a positive link to educational and emotional well-being (Fuligni & Pedersen, 2002; Fuligni, Yip, & Tseng, 2002). Our finding, however, suggests that such an internalized sense of duty to the family may have an indirect negative impact on well-being by deterring youths from seeking the formal mental health support they need, particularly when problems arise within the family. By isolating family obligation values as a more culturally proximal moderator, we moved closer to cultural explanations of group-based disparities. That is, we narrowed in on a particular attribute of Vietnamese-American group that may place adolescents at risk of unmet need.

Across these interactions, racial/ethnic differences in help-seeking behavior only emerged when symptoms or stress was high. This is understandable given that at low levels of need, youth are less likely to seek support regardless of their ethnicity or value orientation. More

interestingly, racial/ethnic differences in help-seeking concentrated around formal support. Previous research point out that a number of cultural, affective, and cognitive barriers deter Asian Americans from seeking support from professionals, including misunderstanding of problem conception (Leong, Kim, & Gupta, 2011; Leong & Lau, 2001), distrust or stigma of mental health services (Gary, 2005; Lee et al., 2009), and lack of awareness for treatment options (Abe-Kim, Takeuchi, & Hwang, 2002). Our results lend support to the notion that formal and informal help-seeking may have distinct pathways as Vietnamese Americans did not shy away from general support relative to their European American peers, but relatively infrequently sought help from adults or formal providers.

These findings have several implications for outreach and intervention efforts. The mental health needs of adolescents are best served when available programs are congruent with their values and help-seeking preferences. For instance, family obligation appears to play an important role in youth entry into mental health services. As such, engagement and intervention efforts that acknowledge both the needs of the family and the individual may help adolescents and their parents strike a better balance between contributing to the family and attending to one's personal concerns. Given that adolescents across racial/ethnic groups were more willing to ask for support from adult social network figures such as parents and teachers rather than formal providers, one approach to increase utilization of mental health care is for such gatekeepers to receive more comprehensive psychoeducation about mental health, and about treatment options and when and how to make referrals. Knowledge about the presentation and consequences of adolescent stress and symptoms can help parents and school staff better identify students in need of mental health services (Kelly, Jorm, & Wright, 2007). As conduits to care, these gatekeepers can help students navigate through the mental health system better if they have appropriate

information about how to make referrals and follow-up about linkage to services.

Psychoeducation may prove especially useful for improving problem detection and access to services for Asian Americans as referral rates have been notably low among this population relative to other racial/ethnic groups (Guo et al., 2014).

There are several limitations that should be considered when evaluating our results. First, although the study used a prospective design to measure factors that longitudinally predicted help-seeking behaviors, adolescents were asked to recall the help they had sought over the past school year; the length of this recall period may potentially have resulted in recall bias. Second, although the exploratory factor analysis identified clear factors of help-seeking support (peers, adults, formal providers), in each category there was more than one class of persons. It is possible that help-seeking behavior varies as a function of these sub-sources, and thus it may be useful for future studies to assess whether factors related to selection of, say, teachers versus parents differ. Although we found family obligation as a moderator of the link between family stress and help-seeking, there were no other interactions between cultural values and mental health need dimensions. It is possible that emotional restraint as a cultural value was not well captured by the newly developed measure, although it was validated against an accepted measure of a related construct. While the current study focused on adolescent mental health decision-making, formal help-seeking is likely influenced by both attitudes of the child and the surrounding caregivers. As such, more research is needed to disentangle the relative contribution that adolescents and adult gatekeepers make in the decision to seek formal mental health care. Finally, participants were categorized in regards to ethnicity based on self-identification, and thus results reflect their perceptions of their ethnicity (Cokley, 2007). Although self-perceptions are an important factor in such constructs, it may be useful for future studies to include other

approaches to assessing ethnicity (e.g., Helms et al., 2005).

To summarize, our results indicate that mental health need alone does not explain adolescent mental health help-seeking, nor in our sample did it explain ethnic or cultural differences in help-seeking. Cultural factors such as family obligation may play an important role in adolescents' decisions to seek formal help for mental health problems and indicate the dynamic interaction between adolescent distress and the sociocultural norms that influence youth. Consideration of family-based factors – both in terms of manifested stress and internalized beliefs and attitudes – seems particularly central to understanding pathways into care for adolescents.

Footnotes

1. The original General Help-Seeking Questionnaire asks participants to rate their help-seeking intentions on a 7-point scale ranging from 1 “extremely unlikely” to 7 “extremely likely” for each source help source. The current study modified the original scale by measuring actual help-seeking behavior instead of intentions. As such, a binary scale of “yes” or “no” were used to assess whether particular help sources were sought.

Table 1-1. Ethnic differences in mental health need, cultural values and help seeking

Variables	European American		Vietnamese American		Analysis results	
	<i>M</i> (SD)	<i>n</i> (%)	<i>M</i> (SD)	<i>n</i> (%)	Significance test	Effect size
<u>Mental health need</u>						
Total problems	57.26 (9.32)		62.38 (10.23)		F(1,167)=11.07**	<i>d</i> = -0.52
Family stress	6.06 (4.03)		9.04 (4.58)		F(1,166)=19.17***	<i>d</i> =-0.69
Academic stress	3.61 (1.79)		4.69 (2.07)		F(1,167)=12.27**	<i>d</i> =-0.55
Peer stress	.84 (1.27)		1.39 (1.58)		F(1,167)=5.86*	<i>d</i> =-0.38
<u>Cultural values</u>						
Family obligation	3.07 (.56)		3.45 (.52)		F(1,166)=19.62***	<i>d</i> =-0.69
Emotional restraint	20.54 (5.71)		21.70 (4.79)		F(1,167)=2.03	<i>d</i> = -0.22
<u>Highest intensity of support sought</u>					$\chi^2(3) = 12.06^{**}$	$\varphi_c = 0.27$
None		7 (10.1%)		12 (12.4%)		
Peer		12 (17.4%)		39 (40.2%)		
Adult		43 (62.3%)		42 (43.3%)		
Formal		7 (10.1%)		4 (4.1%)		

Note: **p* <.05, ***p* <.01, ****p* <.001. Cohen's *d* and Cramer's *V* are used to measure effect size of ANOVA and chi-square results, respectively.

Table 1-2. Summary of main effects from hierarchical multinomial logistic regression models for help seeking sources

Highest intensity of support sought:	Individual Factor Statistics									Overall Model Statistics		
	No Help vs. Formal			No Help vs. Adult			No Help vs. Peer			Fit index		
Predictors	b	SE	OR	b	SE	OR	b	SE	OR	Pseudo R ²	AIC	Likelihood ratio test
Demographic variables										0.06	370.70	$\chi^2[6]=23.54^{***}$
Gender	3.01**	1.15	20.37**	1.62*	0.63	5.03*	1.58*	0.66	4.83*			
Ethnicity	-3.23**	1.17	.04**	-1.02	0.66	0.36	0.36	0.70	1.44			
Mental health need										0.16	357.61	$\chi^2[12]=37.09^{***}$
Emotional / behavioral symptoms	-0.01	0.06	0.99	0.01	0.03	1.01	0.04	0.03	1.04			
Family stress	0.03	0.15	1.03	0.02	0.09	1.02	-0.04	0.09	0.96			
Academic stress	1.20**	0.41	3.32**	-0.02	0.19	0.97	0.11	0.20	1.12			
Peer stress	0.01	0.34	1.01	0.15	0.22	1.16	-0.08	0.23	0.92			
Cultural values										0.18	359.12	$\chi^2[6]=10.50$
Family obligation	0.84	0.91	2.32	0.95	0.51	2.59	0.49	0.53	1.63			
Emotional restraint	0.05	0.10	1.05	-0.10	0.05	0.91	-0.05	0.06	0.95			

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Pseudo R^2 is measured by McFadden's R^2 .

Table 1-3. Summary of interaction effects from hierarchical multinomial logistic regression models for help seeking sources

Highest intensity of support sought: Predictors	Individual Factor Statistics									Overall Model Statistics		
	No Help vs. Formal			No Help vs. Adult			No Help vs. Peer			Fit index		
	b	SE	OR	b	SE	OR	b	SE	OR	Pseudo R ²	AIC	Likelihood ratio test
<u>Model 1</u>										0.22	351.06	χ^2 [3]=14.07**
Eth x Emo/beh symptoms	-0.55*	0.23	0.58*	0.05	0.06	1.05	-0.02	0.07	0.98			
<u>Model 2</u>										0.25	351.87	χ^2 [9]=25.25**
Eth x Family stress	-.85*	0.42	0.43*	0.19	0.21	1.21	-0.23	0.23	0.79			
Eth x Academic stress	-0.55	1.00	0.58	-0.09	0.46	0.92	-0.29	0.51	0.75			
Eth x Peer stress	-0.05	1.30	0.95	-1.47	0.99	0.23	0.14	1.16	1.16			
<u>Model 3</u>										0.19	368.62	χ^2 [6]=2.50
Fam Obligation x Emo/beh symptoms	-0.04	0.09	0.96	0.01	0.05	1.01	<.01	0.05	1.00			
Emo Restraint x Emo/beh symptoms	<.01	0.01	1.00	<.01	<.01	1.00	<.01	<.01	1.00			
<u>Model 4</u>										0.25	369.82	χ^2 [18]=25.30
Fam Obligation x Family stress	-0.76*	0.34	0.47*	-0.06	0.15	0.94	-0.16	0.16	0.85			
Fam Obligation x Academic stress	1.28	0.82	3.58	-0.17	0.36	0.84	-0.03	0.36	0.97			
Fam Obligation x Peer stress	-2.40	1.24	0.09	-0.36	0.59	0.70	-0.28	0.61	0.76			
Emo Restraint x Family stress	0.05	0.04	1.05	-0.01	0.02	0.99	-0.02	0.02	0.98			
Emo Restraint x Academic stress	-0.25	0.14	0.78	<.01	0.05	1.00	-0.03	0.05	0.97			
Emo Restraint x Peer stress	-0.07	0.11	0.93	-0.08	0.06	0.92	-0.05	0.06	0.95			

Note: *p <.05, **p <.01, ***p <.001. Pseudo R² is measured by McFadden's R² ^ Likelihood ratio test conducted against AIC fit index of multivariate model with demographic variables, mental health need and cultural values. Fam Obligation=Family Obligation scale. Emo Restraint=Emotional Restraint scale.

Figure 1-1. Frequency of help-seeking by sources of support.

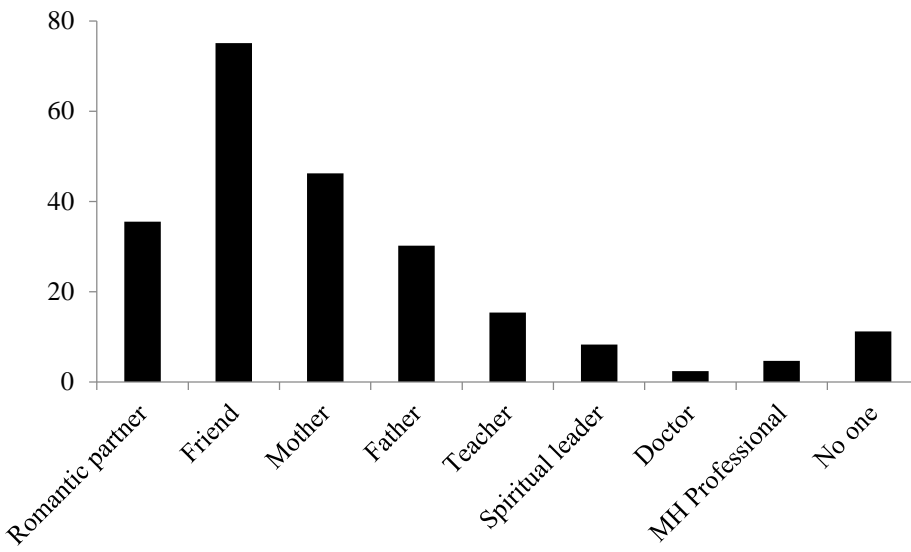
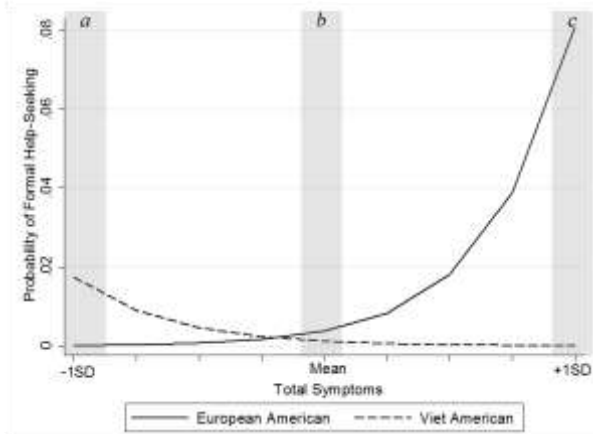
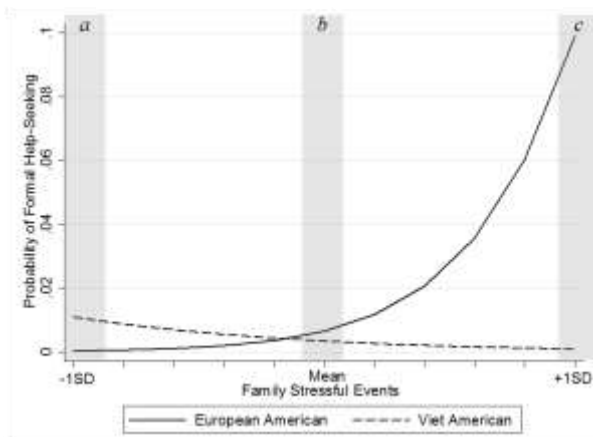


Figure 1-2a. Probability of formal help-seeking as a function of total symptoms and race/ethnicity.



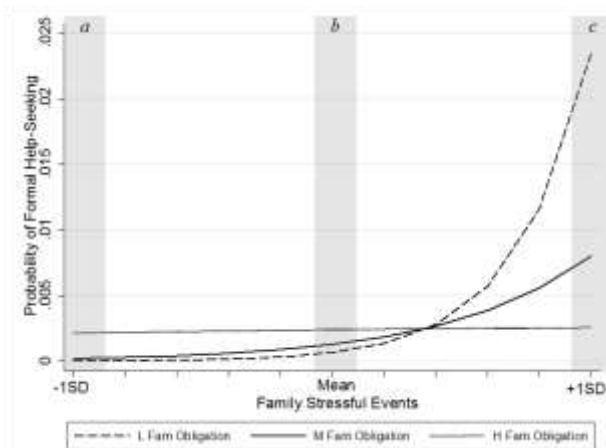
Note: Panels a, b and c depict simple effects of ethnicity at -1SD, mean, and +1SD total symptoms, respectively (European American is the reference group). -1SD: Diff = .15, SE = .06, $p = .02$; Mean: Diff = -.04, SE = .05, $p = .43$; +1SD: Diff = -.26, SE = .08, $p = .001$.

Figure 1-2b. Probability of formal help-seeking as a function of family stressful events and race/ethnicity.



Note: Panels a, b and c depict simple effects of ethnicity at -1SD, mean, and +1SD family stressful events, respectively (European American is the reference group). -1SD: Diff = .09, SE = .07, $p = .21$; Mean: Diff = -.03, SE = .05, $p = .51$; +1SD: Diff = -.22, SE = .08, $p = .004$.

Figure 1-2c. Probability of formal help-seeking as a function of family stressful events and family obligation.



Note: Panels a, b and c depict simple effects of family obligation at -1SD, mean, and +1SD family stress, respectively. -1SD: Diff_{Moderate vs. low obligation} = .007, SE = .005, $p = .12$; Diff_{High vs. low obligation} = .05, SE = .02, $p = .03$; Diff_{High vs. moderate obligation} = .04, SE = .02, $p = .04$; Mean: Diff_{Moderate vs. low obligation} = .003, SE = .009, $p = .34$; Diff_{High vs. average obligation} = .03, SE = .02, $p = .03$; Diff_{High vs. low obligation} = .04, SE = .02, $p = .06$; +1SD: Diff_{Moderate vs. low obligation} = .05, SE = .05, $p = .28$, Diff_{High vs. low obligation} = -.06, SE = .07, $p = .38$, Diff_{High vs. average obligation} = -.008, SE = .03, $p = .76$

STUDY 2

PERCEIVED HELPFULNESS OF SOCIAL SUPPORT FOR EMOTIONAL CONCERNS
AMONG VIETNAMESE AMERICAN AND EUROPEAN AMERICAN ADOLESCENTS

Abstract

Adolescence is characterized by a rich and expanding network of social supports. Although there is clear distinction in youth preference for seeking informal versus formal support (e.g., mental health providers), much less is known about adolescent satisfaction with different sources of support once they have been mobilized. The current study sought to characterize youth perceptions of the helpfulness of support received for emotional concerns and to identify predictors of these perceptions in an ethnically diverse sample of adolescents. Using a prospective design and cross-classified multilevel modeling, we found that race/ethnicity, interdependent cultural values, sources of support, and perceived availability of support influenced youth satisfaction with their help-seeking experiences. Findings may inform the identification of key gatekeepers to formal mental health services and the development of culturally responsive youth engagement interventions.

Keywords: Adolescence, help-seeking, social support, cultural values, cross-classified multilevel modeling

Perceived helpfulness of social support for emotional concerns among Vietnamese American and European American adolescents

As youth transition from childhood into adolescence, their network of social support diversifies. Whereas parents are the main source of support during childhood, relationships outside the family assume increasing importance over the course of adolescence (Helsen, Vollebergh, & Meeus, 2000; Smetana, Campione-Barr, & Metzger, 2006). In particular, peers begin to occupy a central role in the lives of young people. Studies show that with age adolescents not only spend more time with friends but also show greater dependence on their peers for emotional support (Arnett, 2003; Levitt et al., 2005). Although less studied, youth are also increasingly involved in their schools and communities. As such, teachers, spiritual leaders, and other community members may also serve as important sources of social support to young people (Bokhorst, Sumter, & Westenberg, 2010; Zarrett & Eccles, 2006). Lastly, adolescents in distress may seek support from formal health care providers such as doctors and mental health professionals. However, despite the rise in mental health need during adolescence, few youth access or utilize support from formal providers (e.g., Kataoka et al., 2002). Instead, young people tend to rely on informal social supports such as peers, parents, and other adults not formally trained in mental health (Hernan, Philpot, Edmonds, & Reddy, 2010; Jorm & Wright, 2007).

Formal versus Informal Sources of Support

In an effort to understand the underutilization of mental health services, researchers have primarily focused on youth attitudes and behaviors toward formal support. Factors such as race/ethnicity, gender, perceived mental health need, and attitudinal barriers (e.g., stigma) are significantly associated with the intention to seek and the actual use of professional mental health services (e.g., Gould et al., 2004; Sheffield et al., 2004; Wilson, Bushnell, & Caputi, 2011).

However, research has largely ignored adolescents' help-seeking experience with other forms of support within their rich and varied social networks. Research from the adult help-seeking literature suggests that people's general tendency to seek social support from their informal network is significantly related to their willingness to seek formal support for their psychological problems (Hashimoto, Imada, & Kitayama, 2007). Further, although formal and informal supports are qualitatively distinct, they both involve interpersonal interactions that involve the disclosure of personal problems to gain support (Kim, Sherman, & Taylor, 2008).

The role that informal social support plays in the pathway toward formal care is particularly important for adolescents as they do not typically seek mental health treatment on their own. Instead they are directed to services by key gatekeepers such as parents and teachers (Stiffman, Pescosolido, & Cabassa, 2004). Although contact with these informal supports do not always result in a pathway to professional care, it is often a necessary precursor to formal help-seeking. As such, knowledge about adolescents' experience recruiting support within their social network may help identify barriers and improve engagement in formal supports when need arises.

Studies thus far have examined factors that lead up to the recruitment of support. Much less is known about how helpful youth find the support they receive. Understanding adolescents' attitudes and beliefs about their help-seeking experiences, and the factors that shape such perceptions, may inform interventions that are acceptable and subjectively helpful to youth (Reavley, Yap, Wright, & Jorm, 2011). Thus, the aim of the current study was to examine adolescents' perceptions of the helpfulness of support they have sought and received for mental health concerns across support sources. Specifically, we examined the effect of race/ethnicity, cultural values (e.g., family obligation, emotional restraint), sources of support (e.g., formal

versus informal, peers versus adults), and perceived availability of social support on perceptions of helpfulness for Vietnamese American and European American adolescents, two groups with potentially different patterns of help-seeking (Phinney & Ong, 2002).

Predictors of Perceived Helpfulness of Support

Cultural Factors. Most research examining social support experiences has been conducted with Western populations (e.g., European American). However, studies of social support from the adult literature suggest that there are clear cultural differences in use and subjective experience with support-seeking. In particular, individuals from more collectivistic cultures such as Asian Americans differ from individuals from more individualistic cultures such as European Americans in how they seek and evaluate social support (Kim, Sherman, & Taylor, 2008). In both naturalistic and experimental studies, Asian American adults used social support (e.g., family and friends) less to cope with stressors compared to European American adults (Kim, Sherman, Ko, & Taylor, 2006; Wang et al., 2010). Further, when Asian Americans sought social support, they perceived the support they received to be less helpful in resolving stressors than European Americans. Based on the adult literature, we predicted that Vietnamese American youth in the current study would rate their help-seeking experience to be less helpful relative to their European American counterparts.

Scholars contend that differences in the use and impact of social support transactions may be attributable to cultural variation in how people view the self and relationships with others (Kim, Sherman, & Taylor, 2008). In individualistic cultures, relationships take on independent forms; they are thought to be freely chosen and entail relatively few obligations (Adams & Plaut, 2003). In contrast, relationships take on more interdependent form in collectivistic cultures; they are less discretionary and more “given” (Adams, 2005). As such, people from individualistic

cultures may be more willing to ask for support and find received support to be helpful because they believe individuals should proactively pursue personal well-being and that others can freely choose whether to help or not. Individuals from collectivistic cultures, on the other hand, may be less willing to ask for support and perceive received support to be less helpful because of a range of relational concerns, such as burdening their social network, drawing attention to the self, or being criticized (Kim, Sherman, & Taylor, 2008; Chu et al., 2008; Kim et al., 2006; Wang et al., 2010).

Given such cultural variation in the use and evaluation of social support experiences, we hypothesized that cultural values that promote interdependence concerns would predict lower perceived helpfulness of received support. In particular, we anticipated that valuing emotional restraint would predict lower perceptions of helpfulness. Adolescents who have a strong desire to maintain social harmony and not disturb relationships may also prize the ability to withhold their emotions, particularly negative ones (Wang et al., 2010), as they may prefer coping behaviors that do not require explicit disclosure or discussion of their distress with others (Kim et al., 2008). As such, adolescents with strong emotional restraint values may find social support they gain through open expression of emotions to be less helpful for themselves and more burdensome to others. It is also possible that emotional restraint would negatively impact perceived helpfulness because important others around the adolescent with high emotion restraint have greater difficulty detecting distress and providing comfort. As a result, the support offered may be perceived as less satisfactory (Lee et al., 2009).

Another cultural value commonly associated with interdependence goals is family obligation. Family obligation commonly refers to the sense of obligation to a) support, b) assist, and c) respect the wishes of the family. Such sense of filial duty may be a particularly salient

value for perceptions of helpfulness given its hierarchical view of family relationships. One can assist and respect the authority of the family by seeking opinions of elders and following their advice. One can also show filial duty in a more indirect manner, such as honoring the family through achievement or forgoing personal desires in favor of the wishes of the family (Fuligni et al., 1999). As such, individuals with strong family obligation may find mobilizing support less helpful because they have created a burden on others by elevating their own needs and concerns above their obligations to the family.

Sources of Support. Source of social support sought is another possible determinant of the perceived helpfulness of support. Support sources that are general and informal tend to be preferred over specialist services (Jorm & Wright, 2007; Hernan et al., 2010; Offer et al., 1991). Formal support may be less accessible if adolescents have limited knowledge about mental illness and appropriate treatment and face practical barriers such as time and cost (Burns & Rapee, 2006; Vanheusden et al., 2008). Furthermore, scholars contend that young people prefer informal sources because they may feel that someone close and familiar is more likely to understand their needs and continue to value them despite their display of vulnerability. Seeking informal sources of support may be less threatening to youth's sense of self and less stigmatizing than seeking formal sources (Raviv, Sills, Raviv, & Wilansky, 2000; Rickwood, Deane, Wilson, & Ciarrochi, 2005). Although these factors are associated with likelihood of seeking support, it is less clear whether they also affect perceptions of helpfulness once the support has been obtained.

There are also potentially important differences among the various forms of informal support in an adolescent's social network. Studies suggest that peer and parent support are qualitatively distinct and their receipt predicts different psychological outcomes (Helsen et al., 2000; Barrera & Garrison-Jones, 1992; Stice, Ragan, & Randall, 2004). It is less clear whether

adolescents find support from peers or parents to be more helpful. Some studies have demonstrated that friends become more supportive than parents in adolescence (e.g., Reavley et al., 2011; Bokhorst, Sumter, & Westenberg, 2010) whereas others have found that friend support is similar to parent support in importance (e.g., Helsen et al., 2000). In addition to parents and peers, adolescents also have the opportunity to gain support from other sources as they become more involved in their schools and communities (Fredricks & Eccles, 2006; Kort-Butler & Hageman, 2011). Although the broader ecological influence of these institutions on youth development is well documented (Siegler, Deloache, & Eisenberg, 2006), we know little about their specific function as sources of social support to adolescents. Studies thus far have only begun to characterize the perceived availability and use of teachers for social support, noting a decline in teacher support during adolescence (Demaray & Malecki, 2002; Bokhorst et al., 2010). However, no research has examined youth perceptions of the quality of support-seeking that occur outside of the family, and the helpfulness of these transactions compared to well-regarded sources such as parents.

Given the diversity of support sources available in an adolescent's social network but the limited understanding of their usefulness relative to one another, we conducted an exploratory assessment of whether the subjective experience differed across social support sources. Specifically, we compared perceptions of helpfulness for formal versus informal social support, peer versus adult support, and parent versus non-familial adult support. Knowledge of which supports are deemed most helpful by youth could aid in the identification of important gatekeepers to care in an adolescent's social network.

Perceived Social Support. Adolescent's general feelings about how available and positive their social support networks are might also be associated with their perceptions of

helpfulness. Perceiving a supportive social network and knowing that one is cared for by important others buffers the negative impacts of stressful events and may even improve recovery for adolescents with mental health problems (e.g., Levitt et al., 2005; Rueger, Malecki, & Demaray, 2008; Trask et al., 2003). Adolescents who feel generally well supported may be more likely to experience specific support transactions (particularly within their informal support networks) as more helpful. There are important distinctions between perceptions of available support, also known as implicit support, and the actual mobilization of support through active solicitation of help, also known as explicit support. Whereas implicit support is robustly related to well-being, the mobilization of explicit support is associated with no improvement in adjustment at best, and costs to well-being at worst (Bolger & Amarel, 2007). Scholars posit the belief that one could obtain support if needed may provide comfort and solace that helps motivate an individual to cope with stressful events (Wethington & Kessler, 1986). In contrast, actual transactions of social support may entail emotional cost as receipt of support may make salient an individual's difficulty coping with stress (Bolger, Zuckerman, & Kessler, 2000). In the context of the current question concerning perceptions of support once it is mobilized, it is plausible that positive perceptions of implicit social support may attenuate any potential costs of social support transactions and may be positively linked to adolescents' perception of support helpfulness.

In addition to these predicted main effects of helpfulness perceptions, we explored whether ethnicity moderated the associations between source of support, perceived social support, and cultural values on perceived helpfulness. In terms of sources of support, we hypothesized the association between informal support and perceived helpfulness would be weakened for Vietnamese American adolescents relative to European American adolescents. In

the adult literature, Asian Americans tend to use less and find less helpful the supports they gain from friends and family due to relational concerns of burdening important others, particularly if that involves active help-seeking or explicit disclosure of personal distress (Kim et al., 2008). In particular, we predicted that Vietnamese American adolescents would find the support they obtain from adults in their informal network to be least helpful. Collectivistic cultures emphasize filial piety and hierarchical relationships (Kim & Omizo, 2003). As such, Vietnamese American adolescents may view relationship with parents and other adults as more hierarchical and obligatory. They may be reluctant to burden adults with their problems and may find soliciting their support to be distressing. In contrast, Vietnamese American youth may view friendships as more freely chosen and egalitarian. Seeking support from same-age peers may also reduce concerns of negative responses that one may expect from adults such as demand, shame and criticism (Wang et al., 2010; Chu et al., 2008). Within individualistic cultures, there is less emphasis on relationship hierarchy and deference to authority. Compared to their Vietnamese American peers, European American adolescents may view social ties in general to be more egalitarian and voluntary (Adams & Plaut, 2003); they may enter and exit relationships with others – adults and peers – with relative ease and without heightened concerns of creating burden or drawing criticism. As such, they may access support from adults and peers at similar rates and find the help they obtain to be similarly useful. Indeed, Asian American young adults are more likely to seek support from peers than parents, while European Americans access parental and peer support at more comparable rates (Wang et al., 2010; Wang & Lau, 2015)

We also examined whether ethnicity moderated the link between perceived social support and helpfulness of support transactions. Taylor and colleagues (2007) have found that Asian Americans appear to recover better from stress psychologically and physiologically when they

bring to mind thoughts of social support available to them, whereas European Americans fare better by directly soliciting advice or help. This difference may be attributable to cultural distinctions in relationship goals. That is, thinking about the implicit support available in one's social network, which does not require open disclosure of personal problems, may be more useful to individuals from collectivistic cultures that prioritize maintenance of social harmony. In contrast, openly soliciting support from others through the act of explicit disclosure may be more beneficial to individuals from individualistic cultures that value self-expression and verbal sharing of thoughts and feelings. As such, we hypothesized that perceived social support would be more strongly associated with perceptions of support helpfulness for Vietnamese American compared to European American adolescents.

Finally, we examined whether the association between cultural values and perceived helpfulness varied by ethnicity. Knowledge of whether the effect of cultural values on help-seeking experience varied as a function of race/ethnicity would aid in the development of more individualized interventions. For example, if values such as family obligation and emotional restraint have a stronger impact on helpfulness perceptions for Vietnamese Americans, transactions with different support sources such as formal mental health providers could be tailored to address those salient cultural concerns to improve the help-seeking experience. If values are equally important across racial/ethnic groups, researchers can then focus on developing interventions that universally address concerns about emotion expression and family obligation.

Thus, the aim of the current study was to identify predictors of youth perceptions of helpfulness for the support they sought and obtained. Specifically, we examined the independent effects of race/ethnicity, source of support, perceived availability of social support, and cultural

values. Next, we examined whether race/ethnicity moderated the effect of support sources, perceived support, and cultural values on perceived helpfulness. Gender and baseline mental health symptoms were controlled in the current study given their potential impact on youth perceptions of help-seeking experiences (e.g., Chandra & Minkovitz, 2006; Garland, Aarons, Hawley, & Hough, 2003).

Methods

Participants and Procedures

The current sample included 10th and 11th grade Vietnamese American and European American students from the Adolescents Coping with Everyday Stress (ACES) study, a one-year prospective cohort design with three separate cohorts. Participants from the three cohorts were drawn from 10 schools. The percentage of students qualifying for a free or reduced lunch ranged from 12.0% to 76.6%, and 3 schools were designated as Title I eligible. Return rates for the consent packets ranged from 25.8% to 77.3%, and among those who returned consents 55.4% declined participation. This resulted in a total sample of 1528 students who completed the Time 1 (T1) survey across the three cohorts (55.8% Vietnamese American, 37.3% male). In order to balance gender and ethnicity distribution in the prospective sample, 736 students were selected. Within the longitudinal sample, 628 students completed the Time 2 (T2) survey 3 months after the initial assessment (14.7% attrition from T1), and 573 students completed the Time 3 (T3) survey 6 months after the initial assessment (8.8% attrition from T2). In the current study, the sample of 573 students with data at T3 was used because the study variables of interest concerning help-seeking were administered at T3. Specifically, we assessed the outcome variable of perceived helpfulness and the predictor variable of support source at T3. The remaining predictors and control variables were measured at T1 (i.e., race/ethnicity, gender, mental health

need, perceived social support and cultural values). In the total sample, 56.5% (n= 324) were Vietnamese American and 43.5% (n=249) were European American, and 48.2% (n=277) were male.

Measures

Mobilization of social support (Explicit support). Participants completed a modified version of the General Help-Seeking Questionnaire (GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2007) at T3 (6-month follow-up). In this questionnaire, adolescents are asked to identify individuals with whom they have talked during the past academic year regarding a personal or emotional problem, how often they communicated with the source, and how helpful the contact was. Past research has shown that the GHSQ is reliable and valid for diverse youth, including adolescents of Asian descent (Moran, 2007).

Support source. In the current study, source of social support source was determined from the “talked to whom” items on the GHSQ. These items asked adolescents to identify individuals with whom they have talked during the past academic year regarding a personal or emotional problem. Potential support sources included a friend, significant other, parents, teacher, mental health professional (e.g., counselor, psychologist, and social worker), doctor, and religious/spiritual leader. Three dichotomous support source variables were created using recursive partitioning of responses on the GHSQ: a) Formal vs. Informal, b) Peer vs. Adult, and c) Parent vs. Non-family adult. Recursive partitioning is a widely used tool for non-parametric regression and classification in many scientific fields, including psychology. It repeatedly divides participants into binary subgroups based on several dichotomous independent variables (Strobl, Malley, & Tutz, 2009). The first dichotomous variable, Formal vs. Informal, distinguishes whether support was sought from a formal provider (i.e., 1 = doctor or mental

health professional) or an informal source (i.e., 0 = friend, romantic partner, mother, father, teacher, or religious/spiritual leader). The second dichotomous variable, Peer vs. Adult, partitions informal sources to denote whether support was sought from a peer (i.e., 1 = friend or romantic partner) or an adult in an informal setting (i.e., 0 = mother, father, teachers or religious/spiritual leader). The third dichotomous variable, Parent vs. Non-family adult, partitions adult informal supports to distinguish whether support was sought from a parent (i.e., 1 = mother or father) or a non-familial adult in an informal setting (i.e., 0 = teacher or religious/spiritual leader). Figure 1 depicts the logic of the recursive partitioning.

Perceived helpfulness. The perceived helpfulness of an encounter with a support source was assessed using the items inquiring “how helpful the contact was” when respondents indicated they sought a particular source of support on the GHSQ. For each source of support sought, adolescents rated on a 5-point Likert scale how helpful they found the support (1 = not at all helpful, 5 = extremely helpful).

Perceived availability of social support (Implicit support). Perceived availability of social support, or implicit support, was measured using a modified version of the Multidimensional Scale of Perceived Social Support at T1 (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS assesses satisfaction with the amount and quality of social support from family, friends, and significant others. In the current study, we focused on social support from the first two sources as family and friends are the most common sources of support for adolescents. Adolescents were asked to rate on a 5-point Likert scale how much they agree with statements such as “My family really tries to help me” and “I can count on my friends when things go wrong”. The MSPSS has shown good reliability and validity with an Asian sample (Chou, 2000). Internal consistency for the current sample was high for both Family Support

(overall sample: $\alpha = .90$; European Americans: $\alpha = .91$; Vietnamese Americans: $\alpha = .88$) and Friend Support (overall sample: $\alpha = .88$; European Americans: $\alpha = .91$; Vietnamese Americans: $\alpha = .85$). The scale also demonstrated satisfactory 3-month test-retest reliability for Family Support ($r = .77$) and Friend Support ($r = .67$).

Family obligation values. Family obligation was measured using the Attitudes toward Family Obligation scale at T1. The measure assesses attitudes about the family associated with interdependent cultural contexts in several domains. The *Current Assistance* domain assesses the frequency with which adolescents assist their families with household tasks (e.g., “help take care of your brothers and sisters”). The *Respect* domain assesses the extent to which the adolescents respect and follow the wishes of family elders (e.g., “show great respect for your parents”). The *Future Support* domain assesses obligation to support the family in the future (e.g., “help your parents financially in the future”). The scale has shown good reliability and validity with Asian American and European American adolescents (Fuligni et al., 1999). In the current study, the total scale demonstrated good internal consistency (overall sample: $\alpha = .87$; European Americans: $\alpha = .88$; Vietnamese Americans: $\alpha = .85$) and 3-month test-retest reliability ($r = .69$).

Emotional restraint values. Emotional restraint was assessed at T1 using the 6-item Emotional Restraint scale. Item content for the Emotional Restraint (ER) scale was developed for the current study based on a literature review concerning motivations for down-regulation of affect in interdependent cultural groups and included existing items from the Emotional Self-Control subscale of the Asian American Values Scale-Multidimensional (AAVS-M; Kim, Li, & Ng, 2005), which has demonstrated reliability and validity for both European American and Asian American samples (e.g., Park & Kim, 2008). In the ER values scale, participants are asked to rate on a 6-point Likert scale how much they agree or disagree with a series of statements

concerning restraint in emotional expression (e.g., “Showing emotion is a sign of weakness”). A principal axis exploratory factor analysis indicated that a single factor best characterized the six-item scale. The construct validity of the scale was evaluated by assessing relations with avoidant coping, which is conceptually related to emotional restraint (Kashdan, Barrios, Forsyth, & Steger, 2006). We found significant positive relations between ER values and the Avoidant Coping scale of the Children’s Coping Strategies Checklist (Ayers, Sandier, West, & Roosa, 1996) for the overall sample ($r = .53$), European Americans ($r = .61$) and Vietnamese Americans ($r = .45$); all $p < .001$. Internal consistencies for the current sample were adequate (overall sample: $\alpha = .70$; European Americans: $\alpha = .77$; Vietnamese Americans: $\alpha = .62$). The scale had satisfactory 3-month test-retest reliability ($r = .64$).

Mental health need. Mental health need was assessed at T1 using the Youth Self-Report (YSR; Achenbach & Rescorla, 2001). The YSR measures internalizing and externalizing psychopathology, with 112 items covering a range of emotional and behavioral problems (as well as several positive distractor items). Adolescents rate each item on a 0 (“not true”), 1 (“somewhat or sometimes true”), or 2 (“very true or often true”) Likert scale for symptoms over the past three months. In the current study, we used the YSR total problems T-score as a measure of mental health need. Internal consistency was high for the total scale (overall sample: $\alpha = .94$; European Americans: $\alpha = .93$; Vietnamese Americans: $\alpha = .94$). The scale had excellent 3-month test-retest reliability ($r = .81$).

Data Analytic Plan

We used two-level cross-classified multilevel models (CCMLMs) to examine our research questions. In the current study, adolescents only provided helpfulness ratings for support sources they sought. To address the missing values, we used multilevel modeling, which

does not require a) equal numbers of observations across individuals or b) observations to be evenly spaced to perform data analysis. Specifically, cross-classified multilevel models were used to address our unique data structure (see Figure 2). In our model, the dependent variable of helpfulness was measured at the level of the help-seeking encounter (level 1). Encounters were then nested within individuals (level 2) and within support sources (level 2). Individuals and support sources were not nested but crossed. The cross-classification occurred because helpfulness ratings may be similar for one individual regardless of which support source was used. Likewise, helpfulness ratings may be similar for one support source regardless of which individual rated it. As such, encounters from the same individual cannot be treated as independent observations, nor can encounters from the same support source. Unlike traditional multilevel models, CCMLMs address such data structure where the higher level units (i.e., individuals and support sources) are not hierarchically nested but crossed with one another (Raudenbush et al., 2004). Specifically, the cross-classification introduces residual components at both the individual and support source level. The support source residuals represented unobserved support source characteristics that affect helpfulness rating. The individual residuals represented unobserved adolescent characteristics that affect helpfulness rating. These unobserved variables were the source of correlation between outcomes for a) individuals using the same support source and b) support sources used by the same individual. CCMLMs properly treat these dependencies and correctly partition variations among individuals and among support sources. All estimations were carried out using Stata 13 (StataCorp, 2013).

The unconditional models (models without level-1 or level-2 predictors) estimating perceived helpfulness is as follows:

$$L1: Y_{ijk} = \beta_{0jk} + e_{ijk} \quad (\text{Level 1 Model})$$

where encounter helpfulness Y_{ijk} was within the cross-classification of individual j and support source k .

$$\text{L2: } \beta_{0jk} = \gamma_{00} + u_{0j} + v_{0k} \quad (\text{Level 2 Model})$$

where γ_{00} was the intercept, u_{0j} was a residual (also known as random effect) for individuals and v_{0k} was a residual for support sources. The unconditional models are also known as variance components models because they partition variation among different levels. A variance component for individuals estimated the extent to which the probability of getting a certain helpfulness rating for a typical support source varied by individual. A variance component for support source estimated the extent to which the probability of getting a certain helpfulness rating for a typical individual varied by support source.

To ensure hierarchical multilevel models were appropriate for our data structure, we first computed intra-class coefficients (ICCs) for helpfulness. ICCs index the proportion of a variable's variance that is attributable to between-individuals differences as opposed to within-individuals differences. ICC indicated that only 31% of the variability for helpfulness ratings was attributable to differences at the between-subjects level, suggesting that multilevel regressions could more aptly estimate our outcome of interest than simple linear regressions ($\text{ICC} = .31$). Next, using the unconditional model, we conducted a likelihood ratio test (LRT; Bentler & Bonett, 1980) to determine whether cross-classified multilevel models fit the data structure better than traditional hierarchical multilevel models. The cross-classified multilevel models showed better fit, $\chi^2(1) = 23.12, p < .001$. Thus, we proceeded with cross-classified models for the remainder of our analyses. All of our predictors were at the level of the support source or the individual (level 2).

We tested the main effects of individual- and source-level characteristics on helpfulness of an encounter in three separate models in order to account for collinearity of the dichotomous source-level indicators. Specifically, each model included one of the three types of support source (i.e., Formal vs. Informal, Peer vs. Adult, and Parent vs. Non-family adult), race/ethnicity, cultural values, perceived social support, and the control variables of gender and mental health need. An example two-level equation is as follows:

$$\text{L1: Helpfulness}_{ijk} = \beta_{0jk} + e_{ijk}$$

$$\text{L2: } \beta_{0jk} = \gamma_{00} + \gamma_{01}\text{Formal}_k + \gamma_{02}\text{Eth}_j + \gamma_{03}\text{Restraint}_j + \gamma_{04}\text{Obligation}_j + \gamma_{05}\text{FamSupport}_j + \gamma_{06}\text{PeerSupport}_j + \gamma_{06}\text{Gender}_j + \gamma_{07}\text{Need}_j + u_{0j} + v_{0k}$$

We conducted the following analyses to assess whether race/ethnicity interacted with a) source of support, b) perceived availability of social support, and c) cultural values to influence perceptions of helpfulness, controlling for gender and mental health needs. Three separate models tested the interaction between race/ethnicity and the three support source variables (i.e., Formal vs. Informal, Peer vs. Adult, and Parent vs. Non-family adult). One model tested the interaction between race/ethnicity and perceived social support measures (i.e., family support and friend support). And one model tested the interaction between race/ethnicity and cultural values of family obligation and emotional restraint. An example two-level equation testing the interaction between ethnicity (individual-level characteristic) and the dichotomous variable separating formal and informal support (source-level characteristic) is displayed below:

$$\text{L1: Helpfulness}_{ijk} = \beta_{0jk} + e_{ijk}$$

$$\text{L2: } \beta_{0jk} = \gamma_{00} + \gamma_{01}\text{Eth}_j + \gamma_{02}\text{Formal}_k + \gamma_{03}\text{Eth}_j\text{Formal}_k + \gamma_{04}\text{Gender}_j + \gamma_{01}\text{Need}_j + u_{0j} + v_{0k}$$

Results

Preliminary Analyses

The descriptive statistics in Table 1 provide sample sizes for different levels of data, means and standard deviations for variables of interest. We examined potential racial/ethnic differences in the study variables of interest. At the individual-level, Vietnamese American youth reported lower available support from their families relative to European Americans, $t(571) = 6.74, p < .001$. However, no ethnic difference emerged in terms of perceived support from friends, $t(571) = -1.25, p = .21$. For cultural values, Vietnamese American adolescents endorsed greater family obligation values ($t(576) = -5.88, p < .001$), but there was no significant ethnic difference in values concerning emotion restraint ($t(571) = -1.85, p = .07$). In terms of mental health need, Vietnamese American adolescents reported higher total symptoms than European American peers, $t(576) = -4.56, p < .001$.

Figure 3 shows the encounter-level frequencies for social support sources within each racial/ethnic group. On average, youth rated the support they received to be moderately helpful (3.62 out of 5). At the encounter-level, racial/ethnic differences emerged for support source Peer vs. Adult. Compared to European Americans, Vietnamese Americans were more likely to have an encounter with peers (versus adults in their informal network) when seeking support, $\chi^2(1) = 7.87, p < .01$. In contrast, there was no ethnic difference in the likelihood of support encounters with formal versus informal sources ($\chi^2(1) = 2.05, p > .05$), or in the likelihood of support encounters with parents versus non-familial adults ($\chi^2(1) = 3.52, p > .05$). Racial/ethnic differences emerged in perceptions of helpfulness at the encounter-level. Compared to European Americans, Vietnamese Americans rated support encounters as less helpful, $t(1746) = 2.51, p < .01$.

Table 2 shows correlations between helpfulness perceptions, support source, perceived social support, and cultural values. None of the three source variables were associated with helpfulness ratings. Among perceived social support, both family and friend support were positively correlated with perceptions of helpfulness. And for cultural values, family obligation had a positive association with helpfulness ratings while emotional restraint had a negative association.

Main Analyses

Controlling for gender and mental health need, Table 3 shows the main effects of individual- and source-level characteristics on helpfulness on an encounter in three cross-classified models, each with one of the three support sources (i.e., Formal vs. Informal, Peer vs. Adult, and Parent vs. Non-family adult). When model focused on informal supports (peers and adults) as source of support, European Americans had a more positive help-seeking experience relative to Vietnamese Americans, $b = -.18$, $SE = .08$, 95% CI $(-.34 \text{ } -.03)$, $p = .02$. European Americans also rated support to be more helpful than Vietnamese Americans when model only included informal adults (parents and non-family adults) as source of support, $b = -.34$, $SE = .11$, 95% CI $(-.55 \text{ } -.14)$, $p = .001$. Race/ethnicity was marginally related to helpfulness perceptions when source of support included both formal and informal providers, $b = -.15$, $SE = .08$, 95% CI $(-.30 \text{ } .001)$, $p = .05$.

In terms of support source, only Peer vs. Adult was a significant predictor of perceived helpfulness, $b = .21$, $SE = .05$, 95% CI $(.11 \text{ } .31)$, $p < .001$. Adolescents rated the support they obtained from peers as more helpful than support from adults in their informal network. In contrast, youth perceptions of the helpfulness did not differ between informal support versus

formal providers ($b = -.15$, $SE = .14$, 95% CI $(-.42 .13)$, $p = .30$), or between non-familial adults versus parents ($b = -.14$, $SE = .08$, 95% CI $(-.29 .02)$, $p = .08$).

In terms of cultural values, family obligation values were positively related to perceptions of helpfulness across all three main effects models. Adolescents who held stronger obligations to their families rated their help-seeking experiences more positively. In contrast, emotional restraint values were negatively associated with perceptions of helpfulness across models, though the association was only marginally significant in the smallest model containing informal adults.

Perceived availability of social support had varying effects on helpfulness ratings. Specifically, perceptions of available friend support positively predicted helpfulness ratings when the model included both formal and informal providers ($b = .20$, $SE = .04$, 95% CI $[.12 .27]$, $p < .001$) or peers and adults in an adolescent's informal network ($b = .21$, $SE = .04$, 95% CI $[.13 .28]$, $p < .001$). Perceived peer support had no effect on helpfulness ratings when the model only contained informal adults as support source. In contrast, perceptions of available family support only had positive effect on helpfulness ratings when model the included informal adults ($b = .09$, $SE = .05$, 95% CI $[<.001 .17]$, $p < .05$). Perceived family support did not predict helpfulness when models broadened to include peers and adults or formal and informal providers.

Table 4 shows the five cross-classified models we conducted to assess the interactions of a) Ethnicity x Formal vs. Informal, b) Ethnicity x Peer vs. Adult, c) Ethnicity x Parent vs. Non-family adult, d) Ethnicity x Perceived Available Social Support, and e) Ethnicity x Cultural Values. Race/ethnicity significantly moderated the link between support source of Peer vs. Adult and helpfulness ratings, $b = .36$, $SE = .10$, 95% CI $(.17 .56)$, $p < .001$. As shown in Figure 4, Vietnamese Americans rated adult support to be less helpful than peer support, $\chi^2(1) = 31.91$, p

<.001. In contrast, there was no difference in European Americans ratings of the helpfulness of peer and adult support, $\chi^2(1) = .11, p = .74$. There was no significant interaction of Ethnicity x Formal Providers (vs. Informal Supports) ($b = .43, SE = .22, 95\% CI [-.01 .86], p = .06$) or Ethnicity x Parents (vs. Non-familial Adults) ($b = -.21, SE = .15, 95\% CI (-.51 .09), p = .17$) in predicting helpfulness of support.

There was no significant interaction between ethnicity and perceived availability of social support (Ethnicity x Perceived Family Support: $b = -.02, SE = .05, 95\% CI [-.12 .09], p = .77$; Ethnicity x Perceived Friend Support: $b = .06, SE = .06, 95\% CI [-.07 .18], p = .37$). Race/ethnicity also did not moderate the effects of cultural values on helpfulness ratings (Ethnicity x Emotional Restraint: $b = .01, SE = .01, 95\% CI [-.02 .03], p = .70$; Ethnicity x Family Obligation: $b = .09, SE = .10, 95\% CI [-.11 .29], p = .38$).

Discussion

To understand youth attitudes toward help-seeking, we examined how adolescents from two distinctive cultural groups form perceptions about the support they obtain from their social network. Consistent with our prediction, race/ethnicity significantly predicted youth perceptions of support helpfulness. Vietnamese American adolescents rated the support they obtained for their emotional concerns to be less helpful compared to European American adolescents, particularly when support came from informal sources. Our results were consistent with findings that Asian American young adults are less likely to mobilize social support from close others in the face of stress and when they do they are less likely to view support as effective in ameliorating stress (Kim et al., 2006; Wang et al., 2010).

We hypothesized that racial/ethnic differences in support mobilization may be driven by cultural values concerning interdependence that are more commonly observed in collectivistic cultures. However, our results showed that interdependent cultural values had varying effects on helpfulness ratings. As predicted, endorsing the cultural value of emotional restraint was associated with lower helpfulness perceptions of the support received. Youth who value the ability to down-regulate strongly valenced emotions may find the process of soliciting help, which often requires open disclosure of distress, to be an onerous task that is disruptive to social harmony or burdensome for the support provider. Furthermore, youth who adhere to emotional restraint values may not find the support they obtain to be helpful because they are unaccustomed to communicating distress to others, making it difficult for others to offer support that match their needs (Lee et al., 2009). Contrary to our prediction, however, the interdependent value of family obligation was associated with higher perceived helpfulness. Although the filial duty to place needs of the family above one's own has been shown to deter the act of seeking support (Guo et al., 2015), it is possible that once help was obtained, youth found the support they received from important others to be useful because they respect and value the advice of their in-group members (Fuligni et al., 1999). Thus, although emotional restraint and family obligation both delve into interdependent relationship concerns, the two cultural values may elicit different responses following help-seeking. Indeed, recent studies examining youth behavior and attitudes toward formal help-seeking have also found that the two cultural values differ in their predictive validity (Guo et al., 2015).

The main effects of emotional restraint and family obligation on perceptions of helpfulness remained stable across racial/ethnic groups in the current study, underscoring the importance of culturally responsive interventions that move beyond ethnic match. Specifically,

the negative effect of emotional restraint on perceptions of helpfulness suggest that youth may benefit from interventions that address negative beliefs toward emotional expression. Treatments such as mindfulness-based therapies that teach healthy engagement with emotions without avoidance or suppression may not only address maladaptive emotion regulation but also improve youth satisfaction with treatment (e.g., Fung, Guo, Lin, Bear, & Lau, 2016). Likewise, the positive effect of family obligation on helpfulness perceptions suggests that interventions such as family therapy and interpersonal therapy which attend to family collective concerns and interaction processes could appeal to youth with a strong sense of filial piety (Rossello, Bernal, Rivera-Medina, 2012; Hall, 2001).

Of the different sources of social support youth sought for their mental health concerns, only support obtained from peers (versus adults in their informal network) was positively linked with youth ratings of helpfulness. Adolescents rated the support they received from friends and romantic partners to be more helpful than support from parents and other adults. However, closer analysis revealed that this difference was moderated by race/ethnicity. European American youth found support from adults and peers to be equally useful, but Vietnamese Americans preferred peers over adults in their social network. The interaction between race/ethnicity and sources of support was consistent with our hypothesis. Given the emphasis that collectivistic cultures place on filial piety and hierarchical relationships (Kim & Omizo, 2003), it is possible that Vietnamese American youth did not want to burden their elders with their personal problems and thus found the support they obtained from adults less useful. In contrast, they may feel less obligation to same-age peers because those relationships are more freely chosen and egalitarian, making the support they receive through peer transactions subjectively helpful. Indeed, past research shows that compared to European American young adults, Asian Americans are more likely to rely on

discretionary sources of support such as friends than obligatory sources such as parents, due to concerns of burdening valued relationships and receipt of negative feedback (e.g., criticism, blame) from family members (Wang et al., 2010). Our results extends the literature by showing that in addition to parents, youth from collectivistic cultures may also be reluctant to seek support from adults outside the family due to the hierarchical and more involuntary nature of these relationships.

Clinically, our finding that race/ethnicity moderated the positive effect of peer support on helpfulness perceptions suggest that peers could be particularly effective in engaging ethnic minority youth who not only underutilize formal support but also tend to rely less on adults in their informal network (Flores, 2010; Garland, Lau, Yeh, McCabe, Hough, & Landsverk, 2005). A number of clinical trials have demonstrated the efficacy of group-based interventions (e.g., Kaslow & Thompson, 1998). In addition to being cost-efficient, participating in treatment with same-age peers gives adolescents a chance to learn from one another, offer feedback, develop a sense of shared experience, and marshal peer support that can continue following the end of treatment (Rossello, Bernal, & River-Medina, 2008). Though more research is needed, our findings suggest that peer group-based interventions could be particularly engaging for ethnic minority youth given their heightened concerns of creating burden for and incurring negative feedback from adults in their social network. Additionally, peers could be an asset in connecting ethnic minority adolescents to services relative to traditional gatekeepers such as parents and teachers. Although the area of peer gatekeepers remains underdeveloped, preliminary findings suggest that adolescents are capable of identifying mental health need and obtaining support for their peers after participating in school-based interventions such as suicide prevention training (Stuart, Waalen, & Haelstromm, 2003; Sohn, 2011; Isaac, Katz, & Enns, 2009). Future research

should explore whether peer gatekeeping is particularly beneficial to ethnic minority youth. Could simple interventions that teach students how to recognize a friend in need and where to go for help improve the markedly low rates of mental health service utilization among ethnic minority youth?

We did not detect a difference in helpfulness perceptions toward formal versus informal support. It is reassuring that adults and peers as support providers were rated as similarly helpful to formal care providers in the current study because it appears that for this community sample of adolescents, perceived helpfulness did not depend on support sources having specialized health or mental health training. Given that youth prefer to seek help from close and familiar individuals (Raviv et al., 2000; Rickwood et al., 2005), it is a positive indication that these natural support networks are capable of addressing the concerns of typically developing youth. We also did not find any differences in perceived helpfulness between support obtained from parents versus non-familial adults. The scant literature comparing the two forms of social support suggest that adolescents are less likely to seek help from teachers or believe they are available relative to parents. However, our finding revealed that when adolescents actually mobilized social support from teachers and other adults outside the family, they found the help-seeking experience to be equally helpful as seeking support from parents. The lack of difference between parents and non-familial adults suggest that within informal network, there are multiple adult gatekeepers that can listen when problems arise and link the youth to formal services. Our findings support the value of mental health awareness training for school personnel and public mental health education campaigns for community adults (e.g., Wyman et al., 2008; Frazier, Abdul-Adil, Atkins, Gathright, & Jackson, 2007).

As hypothesized, youth perceptions of available social support positively predicted their satisfaction with the support they obtained. Perceiving that one has a supportive social network and knowing that one is cared for by important others can not only buffer the negative impact of stress (Levitt et al., 2005; Rueger et al., 2008) but also attenuate the emotional cost of soliciting social support (Bolger et al., 2000). Interestingly, perceptions of having supportive friends versus supportive family had different implications on help-seeking attitudes. Adolescents who felt they generally had available support from friends reported more positive help-seeking experience, regardless of whether the support was formal or informal, peer or adult. In contrast, adolescents who perceived support to be available from family rated help-seeking experiences positively when the support was from adults in their informal network, such as parents and teachers. In other words, having a supportive peer network contributed to a positive help-seeking experience overall, while having supportive family only positively influenced help-seeking experience with informal adults.

The difference between perceived availability of peer versus family support is reflective of evolving social networks during adolescence. Peers play an increasingly prominent role as adolescents seek autonomy and intimacy in relationships outside the family (Scholte, Van Lieshout, & Van Aken, 2001; Smetana et al., 2006). During this period of growth, perceptions of peer support may be a stronger indicator of positive psychosocial adjustment relative to family support (Laible, Carlo, Raffaelli, 2000). It is possible that youth who have positive perceptions of their peers have broader social networks, are more developed in their abilities to identify and solicit support, and ultimately benefit more from these social competencies, though further research is needed to disentangle perceptions of social support from other protective factors relevant to adjustment and help-seeking.

There are several important limitations in the current study. First, all of our data were gathered through self-report measures from adolescents. While our aim was to understand youth's subjective experience of social support seeking, relying on adolescent report for all measures introduced shared informant variance. Future studies may wish to concurrently assess how different sources of support (e.g., parents, teachers) perceive the same transaction of social support reported by adolescents. While previous research on youth perception of social support used mainly cross-sectional design, the current study examined predictors of helpfulness ratings in a prospective design. However, the time that elapsed from the first assessment to the final one was relatively short (i.e., six months) and may not have captured variability in help-seeking attitudes and behavior during adolescence, a period characterized by shifting social environment.

Notwithstanding these limitations, the current study is one of the first to examine how adolescents from different cultural groups form perceptions about the support they obtain in a prospective design. We moved beyond the simple dichotomy of formal and informal supports to study a diverse and rich network of social supports used by adolescents that includes peers, parents, school and community adults, and (mental) health professionals. Race/ethnicity played an important role in youth satisfaction with the support they obtained, particularly in distinguishing helpfulness of adult versus peer support. Beyond these race/ethnic differences, youth beliefs about their social relationships, in terms of their quality and expected role in the process of support-seeking, also affected their helpfulness perceptions. To foster positive help-seeking experiences, it is crucial to take into consideration the cultural and social capital of youth from diverse backgrounds.

Table 2-1. Ethnic differences in social support, cultural values, mental health need and help-seeking indicators.

	N _{individuals}	n _{encounters}	European American		N _{individuals}	n _{encounters}	Vietnamese American		Analysis results
INDIVIDUAL-LEVEL			M (SD)	n _{encounters} (%)			M (SD)	n _{encounters} (%)	Significance test
<u>T1 Perceived support</u>									
Family support	249	-	4.41 (1.27)		330	-	3.67 (1.33)		<i>t</i> (571) = 6.74***
Friend support	249	-	4.55 (1.16)		330	-	4.66 (1.07)		<i>t</i> (571) = -1.25
<u>T1 Cultural values</u>									
Family obligation	248	-	3.20 (.68)		330	-	3.51 (.59)		<i>t</i> (576) = -5.88**
Emotional restraint	249	-	21.13 (5.44)		330	-	21.91 (4.70)		<i>t</i> (571) = -1.85
<u>Mental health need</u>									
Total symptoms	249		58.03 (9.53)		329		61.63 (9.29)		<i>t</i> (576) = -4.56***
SOURCE-LEVEL									
<u>Type of support source</u>									
Formal vs. Informal	-	648	-	42 (6.5)	-	722	-	34 (4.7)	$\chi^2(1) = 2.05$
Peer vs. Adult	-	606	-	268 (44.2)	-	688	-	358 (52.0)	$\chi^2(1) = 7.87^{**}$
Parent vs. Non-fam adult	-	338	-	264 (78.1)	-	330	-	237 (71.8)	$\chi^2(1) = 3.52$
ENCOUNTER-LEVEL									
Helpfulness	-	795	3.69 (1.02)		-	953	3.56 (1.05)		<i>t</i> (1746) = 2.51*

Note. **p* < .05, ***p* < .01, ****p* < .001

Table 2-2. Correlations between helpfulness, support source, implicit support, and cultural values

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Perceived helpfulness	-										
2. Mental health need	-.22***	-									
3. Gender	-.001	.04	-								
4. Ethnicity	-.04	.10***	-.003	-							
5. Formal vs. Informal†	-.02	.13**	.11*	-.08	-						
6. Peer vs. Adult†	-.04	.10*	.001	.18***	-.09*	-					
7. Parent vs. Non-fam adult†	-.01	-.12*	.13*	-.15**	.02	-.08	-				
8. Family support	.21***	-.43***	-.07**	-.26***	-.06	-.34***	.23***	-			
9. Friend support	.33***	-.22***	.05	-.04	-.17***	.04	-.05	.32***	-		
10. Family obligation	.21***	-.15***	.02	.16***	.02	-.12**	-.05	.30***	.12***	-	
11. Emotional restraint	-.25***	.28***	-.08**	.06*	.08	.13**	-.05	-.27***	-.39***	-.06*	-

Note. Gender (0=Male 1=Female); Ethnicity (0=European American 1=Vietnamese American); †Binary variables converted to ratio variables due to collinearity; * $p < .05$. ** $p < .01$. *** $p < .001$

Table 2-3. Main effect cross-classified multilevel models with L2 source- and individual-level variables predicting L1 encounter-level helpfulness perceptions

Predictors	Model 1: Formal vs. Informal				Model 2: Peer vs. Adult				Model 3: Parent vs. Non-Family Adult			
	Coefficient	SE	<i>p</i>	95%	Coefficient	SE	<i>p</i>	95%	Coefficient	SE	<i>p</i>	95%
Source*	-0.15	0.14	0.30	[-.42 .13]	0.21	0.05	<.001	[.11 .31]	-0.14	0.08	0.08	[-.29 .02]
Ethnicity	-0.15	0.08	0.05	[-.30 .001]	-0.18	0.08	0.02	[-.34 -.03]	-0.34	0.11	0.001	[-.55 -.14]
Family support	0.04	0.03	0.24	[-.02 .10]	0.04	0.03	0.28	[-.03 .10]	0.09	0.05	<0.05	[<.001 .17]
Friend support	0.20	0.04	<.001	[.12 .27]	0.21	0.04	<.001	[.13 .28]	0.09	0.05	0.07	[-.01 .19]
Emotional restraint	-0.02	0.01	0.01	[-.03 -.01]	-0.02	0.01	0.03	[-.03 -.002]	-0.02	0.01	0.08	[-.04 .002]
Family obligation	0.24	0.06	<.001	[.12 .35]	0.25	0.06	<.001	[.13 .36]	0.32	0.08	<.001	[.17 .48]

Note: *L2 source-level predictors for Model 1 was Formal vs. Informal (1 = Formal provider; 0 = Informal support), for Model 2 was Peer vs. Adult (1 = Peers; 0 = Adults), and for Model 3 was Parent vs. Non-family adult (1 = Parents; 0 = Non-family adults). All models included random intercept effects for source and individuals. Gender and mental health need were included as Level 2 control variable in all models. L2 individual-level predictors were Ethnicity (1 = Vietnamese American; 0 = European American), Family Support, Friend Support, Emotional Restraint and Family obligation.

Table 2-4. Cross-classified multilevel interaction models with L2 source- and individual-level variables predicting L1 encounter-level helpfulness perceptions

Predictor	Coefficient	SE	<i>p</i>	95% CI
Model 1: Ethnicity x Source				
A: Formal vs. Informal				
Ethnicity	-0.07	0.07	0.31	[-.22 .07]
Formal vs. Informal	-0.32	0.17	0.06	[-.66 .01]
Eth x Formal vs. Informal	0.43	0.22	0.06	[-.01 .86]
B: Peer vs. Adult				
Ethnicity	-0.26	0.09	0.00	[-.44 -.09]
Peer vs. Adult	0.02	0.07	0.76	[-.12 .16]
Eth x Peer vs. Adult	0.36	0.10	<.001	[.17 .56]
C: Parent vs. Non-Family Adult				
Ethnicity	-0.08	0.15	0.59	[-.38 .22]
Parent vs. Non-family adult	-0.01	0.11	0.93	[-.23 .21]
Ethnicity x Parent vs. Non-family adult	-0.21	0.15	0.17	[-.51 .09]
Model 2: Ethnicity x Perceived Support				
Ethnicity	-0.25	0.31	0.42	[-.86 .36]
Family Support	0.09	0.04	0.04	[.01 .18]
Friend Support	0.16	0.05	0.00	[.07 .25]
Ethnicity x Family Support	-0.02	0.05	0.77	[-.12 .09]
Ethnicity x Friend Support	0.06	0.06	0.37	[-.07 .18]
Model 3: Ethnicity x Cultural Values				
Ethnicity	-0.55	0.45	0.22	[-1.43 .33]
Emotional Restraint	-0.04	0.01	<.001	[-.05 -.02]
Family Obligation	0.25	0.07	0.001	[.10 .39]
Ethnicity x Emotional Restraint	0.01	0.01	0.70	[-.02 .03]
Ethnicity x Family Obligation	0.09	0.10	0.38	[-.11 .29]

Note. All models included random intercept effects for source and individuals. Gender and mental health need were included as Level 2 control variable in all models.

Figure 2-1. Recursive partitioning of sources of social support.

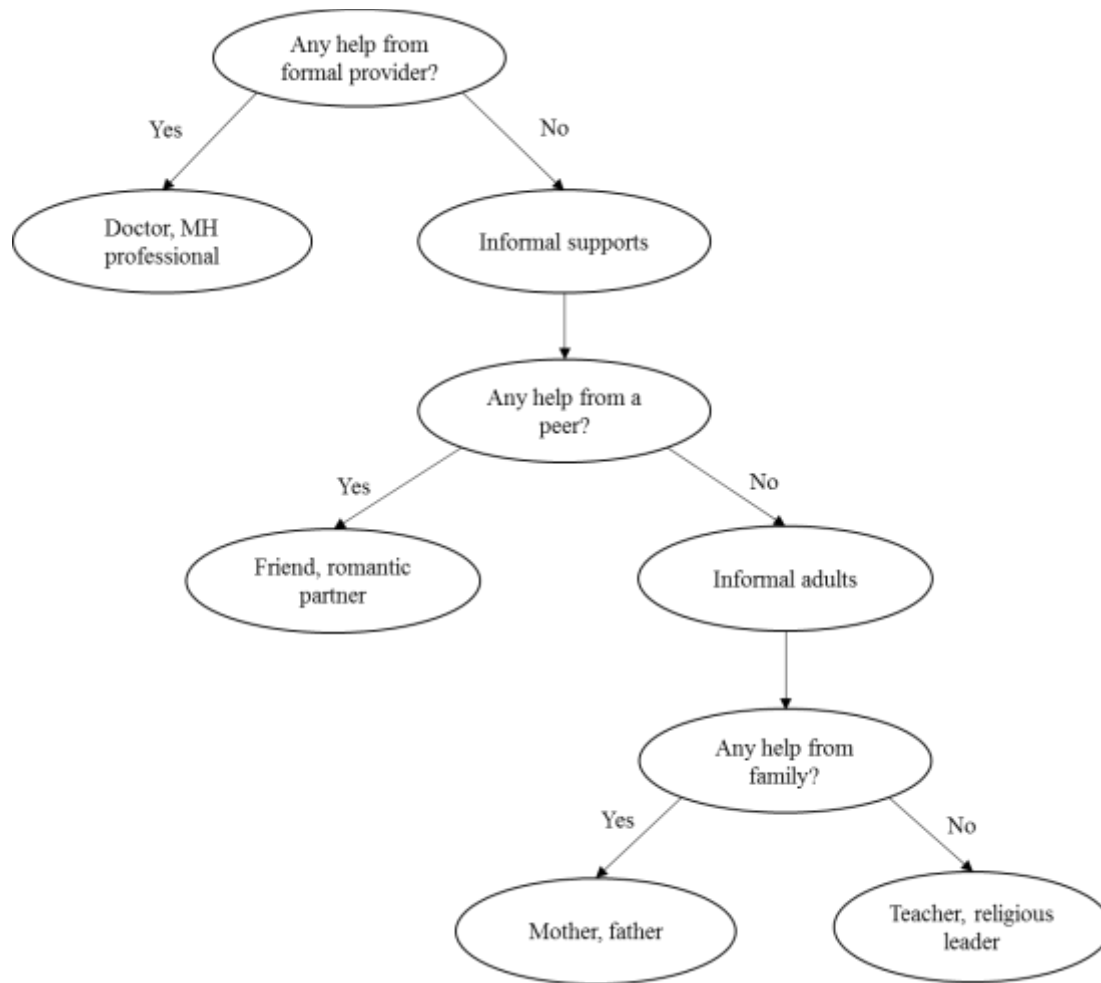


Figure 2-2. Help-seeking encounters nested within individuals and sources of social support.

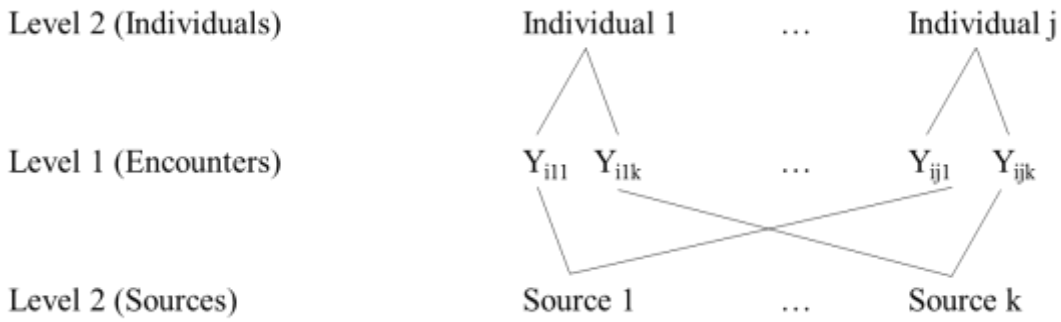


Figure 2-3. Frequency of social support encounters by race/ethnicity.

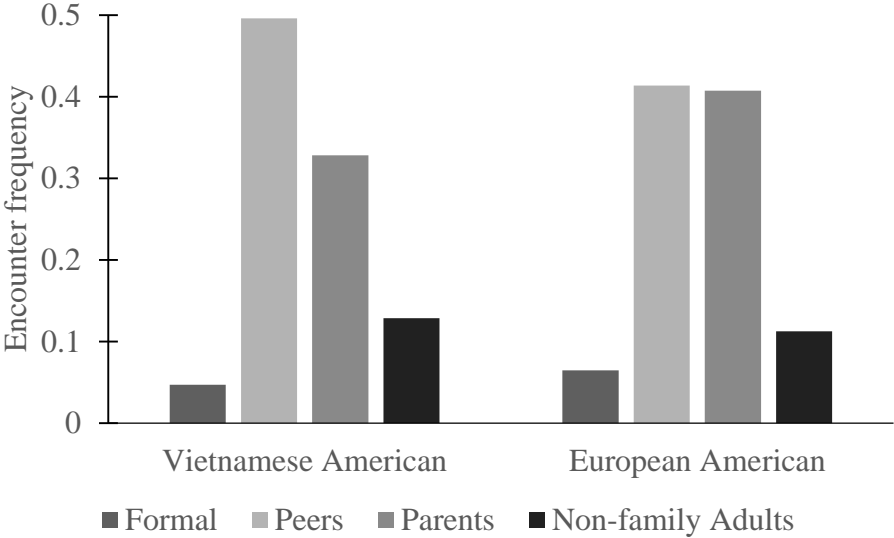
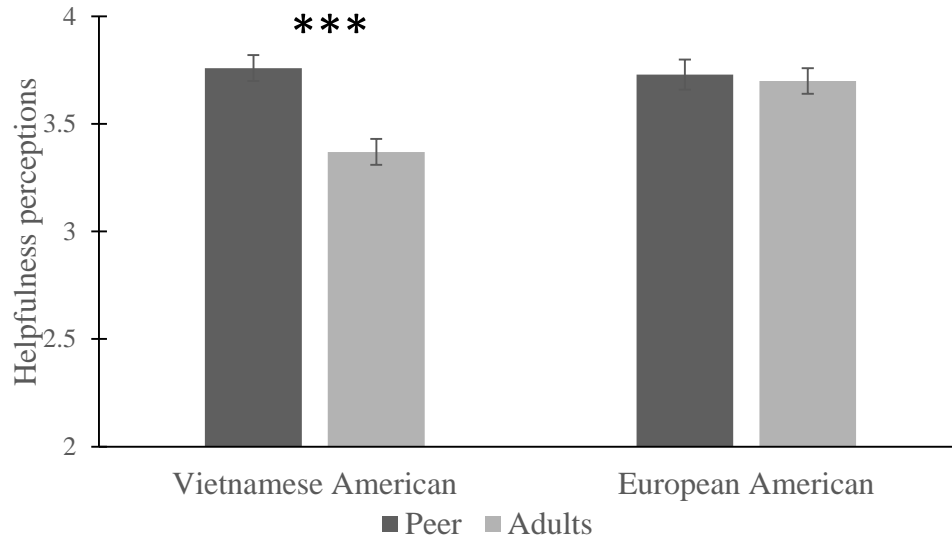


Figure 2-4. Interaction between race/ethnicity and source of social support on helpfulness perceptions



Note: *** $p < .001$

STUDY 3

DETERMINANTS OF ADOLESCENT PREFERENCES FOR PREVENTIVE INTERVENTIONS FOR DEPRESSION: CULTURAL FACTORS AND RISK PROFILES

Abstract

In the interests of providing patient-centered care, researchers and providers are increasingly interested in client preferences for psychological interventions. Yet, we know little about preferences for specific types of evidence-based interventions and there is a particular dearth of knowledge about adolescent preferences. Given the markedly high rates of unmet mental health need during adolescence, particularly for depression, understanding how youth form preferences toward interventions could inform treatment engagement efforts. The current study examined associations between race/ethnicity, cultural values, risk profiles and preferences toward two preventive interventions for depression among at-risk adolescents from two ethnocultural groups. Preference for interpersonal therapy was linked to exposure to family stress, whereas preference for mindfulness-based interventions was related to cultural values concerning emotional regulation and reliance on avoidant coping. Furthermore, race/ethnicity moderated the association between avoidant coping and intervention preference. Implications are discussed in terms of adolescent involvement in their own mental health decision-making.

Keywords: client preference, mindfulness-based intervention, interpersonal therapy, cultural values, risk factors

Determinants of adolescent preferences for preventive interventions for depression: Cultural factors and risk profiles

It is estimated that 20% of youth will have had at least one episode of major depressive disorder by the age of 18 (Weisz, McCarty, & Valeri, 2006). However, only a small fraction of youth meeting diagnostic criteria receives any form of treatment, let alone an empirically supported intervention (Clark, Jansen, & Cloy, 2012; Wells, Kataoka, & Asarnow, 2001). The rate of unmet need is even higher among ethnic minority youth (Cummings & Druss, 2011). Understanding youth preferences toward psychological interventions may shed light on low rates of utilization and improve engagement and outcomes in treatment (Jaycox et al., 2006). Studies show that youth preferences influence initiation and adherence to treatment in both usual care and research settings (TenHave, Coyne, Salzer, & Katz, 2003). Research with adult mental health consumers shows that clients who receive their preferred treatment show greater improvement, more compliance, and less premature terminations (Lin et al., 2005; Swift, Callahan, & Vollmer, 2011).

The American Psychological Association's definition of evidence-based practice calls for the integration of research evidence with considerations of patient culture and preferences in the clinical decision-making process (Swift, Callahan, Ivanovic, & Kominiak, 2013). Yet there has been very little research on youth perspectives toward specific evidence-based interventions, and the clinical and cultural factors that shape their treatment preferences.

Client Preferences

Client preferences refer to behaviors or attributes of the therapist or therapy that clients value or desire (Arnkoff, Glass, & Shapiro, 2002). Clients may have preferences about types of

treatment, therapist characteristics, or activities that take place during treatment (Swift et al., 2011). Studies of depression treatment thus far have focused on preferences for undertaking active treatment versus watchful waiting, and psychotherapy versus antidepressant medications. Among these choices, active psychotherapy has emerged as the preferred treatment for depression among adolescents (Bradley, McGrath, Brannen, & Bagnell, 2009; Jaycox et al., 2006). Factors such as female gender, prior treatment experience, and presence of anxiety disorders significantly predict preference for active treatment over watchful waiting. Among those seeking active treatment, European American ethnicity, negative attitudes about depression care, prior treatment experience, and anxiety predicted preference for medication over psychotherapy. These findings closely mirror preferences reported by adults (Dwight-Johnson, Sherbourne, Liao, & Wells, 2000). However, beyond these global preferences for psychotherapy versus medication, little is known about how adolescents differentiate among the many psychological interventions available. Given that there are numerous efficacious treatments available that target a variety of risk factors associated with depression (e.g., March et al., 2007; Reivich, Gillam, Chaplin, & Seligman, 2013; Sander & McCarty, 2005), understanding preferences toward specific evidence-based interventions and the types of client characteristics that shape such attitudes may improve youth engagement and outcomes in treatment (Ollendick, Neville, & Chorpita, 2006).

Interpersonal therapy (IPT) is one of the most widely used treatments for depression that has shown efficacy across racial and cultural groups (Rossello & Bernal, 1999; Bolton et al., 2003; Tang, Jou, Ko, Huang, & Yen, 2009). The intervention focuses on interpersonal issues as one of the key factors in the genesis and maintenance of negative mood (e.g., Klerman & Weissman, 1994; Mello, Mari, Bacaltchuk, Verdelli, & Neugebauer, 2004). Using the basic tenets

of IPT, Mufson and colleagues have developed Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST) as a preventive intervention for youth depression. IPT-AST focuses on psychoeducation and general skill-building that target the framework of three interpersonal problem areas: interpersonal role disputes, role transitions, and interpersonal deficits (Young, Mufson, & Davies, 2006). Consistent with interpersonal theories of depression, prospective studies have found that increases in depressive symptoms in adolescents are associated with ineffective interpersonal problem-solving (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Rudolph, Hammen, & Burge, 1994) and high levels of conflict and low levels of perceived support in family, peer and romantic relationships (e.g., Eberhart & Hammen, 2006). Interpersonal vulnerability factors and depression are reciprocally related, such that interpersonal difficulties precede depression which then further exacerbates interpersonal difficulties (Garber, 2006; Gotlib & Hammen, 1992). Thus, IPT-AST cultivates interpersonal skills to address problematic relationships and promote positive relationships to decrease the risk for depression.

Mindfulness-based therapies are a new class of psychological interventions that have been shown to be efficacious in the prevention and treatment of depression (e.g., Helen & Teasdale, 2004; Kingston, Dooley, Bates, Lawlor, & Malone, 2007). The last decade has seen rapid increase in the study and dissemination of mindfulness-based interventions (Burke, 2010). Therapies rooted in mindfulness involve paying attention to ongoing sensory, cognitive, and emotional experience in a particular way: on purpose, in the present moment, and nonjudgmentally (Kabat-Zinn, 2003). Such nonjudgmental awareness may facilitate a healthy engagement with emotions, allowing the person to genuinely experience and express their emotions without under-engagement (e.g., experiential avoidance and thought suppression) or over-engagement (e.g., worry and rumination) (Bridges, Denham, & Ganiban, 2004; Chambers,

Gullone, & Allen, 2009; Hayes & Feldman, 2004). As such, mindfulness-based interventions may be particularly beneficial in addressing maladaptive emotion regulation. Indeed, studies have found a significant relationship between mindfulness and adaptive emotion regulation strategies, even after controlling for symptoms of stress, anxiety, and depression (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2006; Gratz & Roemer, 2004). Building on these findings, researchers and clinicians have begun to teach mindfulness practices to children and adolescents in order to strengthen their emotion regulation skills. Learning to BREATHE (L2B; Broderick, 2013) is a school-based preventive intervention that aims to help youth learn how to use mindfulness-based skills to manage emotions. Participation in the classroom-based curriculum has resulted in improvement in affective regulation and reduction of depressive symptoms (Broderick & Metz, 2009; Metz, Frank, Reibel, Cantrell, Sanders, & Broderick, 2013; Fung, Guo, Jin, Bear, & Lau, 2016).

Emerging literature suggests that client preferences may differ across racial/ethnic groups. Compared to European Americans, individuals from ethnic minority groups – youth and adults – have less knowledge and more negative attitudes toward antidepressant treatment of depression. When offered a choice, they are more likely to select psychotherapy over medication (Chandra, Scott, Jaycox, Meredith, Tanielian, & Burnam, 2009; Jaycox et al., 2006; Sen, 2004). However, little is known about youth perspectives toward different empirically supported interventions for depression, such as IPT-AST and L2B. We addressed this limitation by examining race/ethnicity as a predictor of intervention preferences. Relative to other mental disorders, racial/ethnic disparities are particularly apparent in the treatment of childhood depression (Gudino, Lau, Yeh, McCabe, & Hough, 2008; Gudino, Lau, & Hough, 2008). Ethnic minority youth with internalizing needs are not only less likely to be identified by adult

gatekeepers, but they continue to underutilize services even after their problems have been detected and flagged through universal depression screenings in schools (Guo, Kim, Bear, & Lau, in press). Given such shortcoming, identifying what forms of intervention adolescents prefer may be particularly valuable to researchers and clinicians in their efforts to engage ethnic minority youth in needed care.

Moving beyond models of race/ethnicity, we were also interested in exploring whether culturally derived values influence preference for specific preventive interventions for depression. Individuals from collectivistic cultures tend to perceive the self as connected to others and defined by group memberships and relationships (Markus & Kitayama, 1991). Such interdependent self-construal places greater emphasis on in-group goals rather than personal ones. In contrast, individuals from individualistic cultures tend to perceive the self as autonomous and separate from others. Such independent self-construal gives priority to personal goals over in-group ones (Singelis, 1994). Relatedly, collectivistic cultures also emphasize the value of family obligation. Youth demonstrate a strong sense of responsibility to the family by placing the needs of the family before their own (Fuligni, Tseng, & Lam, 1999). They are more likely to offer assistance, show respect, and contribute to the family in order to show solidarity and care for family members. These distinct cultural norms and expectations suggest that youth who value interdependence and family obligation may find IPT-AST more acceptable given its focus on improving social interactions and restoring harmony to one's relationships (Mufson et al., 2014). Indeed, IPT-AST not only reduced depressive symptoms among Latino youth, but it also improved their interpersonal functioning, leading researchers to reason that the intervention is congruent with collectivistic values such as *familismo* (Mufson et al., 2014; Rossello, Bernal, & Rivera-Medina, 2008).

However, it is possible to overstate the alignment of IPT-AST with interdependent and familistic values. Interpersonal therapy teaches skills such as asserting one's needs during communication to address interpersonal role disputes and role transitions (Young, Mufson, & Davies, 2006). Youth who value social harmony and needs of the group may be reluctant to assert themselves and engage in some prescribed communication strategies with family members that may not align with traditional hierarchical family structures common in interdependent cultural groups (Greenfield, Keller, Fuligni, & Maynard, 2003). Indeed, scholars contend that while individuals from individualistic culture are more likely to use active problem-focused coping strategies aimed at reducing external stressors such as sources of disagreement with parents, individuals from collectivistic culture are more likely to rely on coping strategies that avoid external stressors and instead focus on self-adaption (Chun, Moos, & Cronkite, 2006; Weisz, Rothbaum, & Blackburn, 1984).

Furthermore, specific beliefs and values about emotional expression may also be linked to intervention preferences. Because group concerns are weighted relatively more strongly than personal concerns, individuals from collectivistic cultures are socialized to exercise restraint over the expression of strong emotions, particularly negatively valenced emotions (Friedlmeier, Corapci, & Cole, 2011; Louie, Oh, & Lau, 2013). Cultural psychologists have posited that individuals with an interdependent orientation seek to maintain social harmony and accommodate to the perceived needs of others through emotion restraint rather than seeking to exert social influence on others through emotional expression (Markus & Kitayama, 1991; Tsai, Knutson, & Fung, 2006). For youth who value the ability to down-regulate emotional experience and display, the premise of mindfulness which teaches one to actively attend to emotional experience in the present moment may be difficult to practice or accept. Hall and colleagues

(2011) have argued that the concept of attuning to one's own internal thoughts and feelings may run counter to the goal of emotional self-control, which emphasizes attunement to one's relationships and the social role demands.

On the other hand, it may be that youth who value emotional restraint would be drawn to mindfulness approaches in order to achieve healthy and balanced engagement with emotions. Studies show that when individuals actively suppress or avoid their emotions, it paradoxically increases access to the unwanted feelings, strengthens emotional arousal, and exacerbates rumination and worrying (e.g., Aldao, Nolen-Hoeksema, & Schweizer, 2010). Mindfulness interventions target the struggle against unpleasant emotions and aim to reduce experiential avoidance (Hayes & Wilson, 2003). When presented with this intervention rationale, youth who routinely practice emotion suppression may find the intervention approach personally relevant.

Given the dearth of research on youth cultural values and their link to intervention preferences, we conducted an exploratory assessment of how collectivistic values of interdependent self-construal, family obligation and emotional restraint relate to preference for L2B versus IPT-AST. Understanding how these factors affect youth preference for specific interventions would aid in the development of culturally-competent and individualized treatments.

Although IPT and mindfulness-based therapies have both been shown to be efficacious in the treatment of youth depression (e.g., Biegel, Brown, Shapiro, & Schubert, 2009; Rosselló, Bernal, & Rivera-Medina, 2012), the former focuses on active skill building to act on interpersonal stressors to reduce depressive symptoms (Klerman & Weissman, 1994) whereas the latter targets maladaptive emotion regulation strategies such as emotion suppression and experiential avoidance (Chambers et al., 2009). As such, client preferences toward the two

interventions may be predicted by different types of adolescent risk profiles. If adolescents are able to make informed choices according to their needs, we would expect those with more problems in the interpersonal domain to show greater preference for IPT-AST, and those who engage in more avoidant coping strategies to show greater preference for L2B. To the best of our knowledge, there are no studies thus far – adult or adolescent – that have examined the association between risk profiles and preferences toward specific interventions. Thus, we conducted an exploratory assessment of whether adolescents form preferences about mental health interventions in ways that align with their indications for intervention.

Thus, the aim of the current study was to determine correlates of youth preference for two empirically supported preventive interventions (i.e., IPT-AST for interpersonal therapy and L2B for mindfulness-based intervention) for Vietnamese Americans and European American adolescents who are at risk for depression. Factors of interest included race/ethnicity, cultural values (i.e., interdependent self-construal, family obligation values, and emotional restraint values), and adolescent risk factors (i.e., interpersonal stress and avoidant emotion regulation strategies). In addition, we were interested in assessing whether race/ethnicity moderated the effects of risk factors and cultural values on intervention preferences. Examining how indicated need and value orientations shape attitudes of youth from different racial/ethnic groups may shed light on determinants of disparities in service utilization and inform the development of specific engagement strategies for at-risk youth.

Methods

Participants and Procedures

The current sample included 10th and 11th grade Vietnamese American and European

American students from the 2013-2014 cohort of a larger study examining cultural variation in stress experiences, coping, and mental health. Participants were recruited from 4 ethnically-diverse high schools in Southern California serving mixed lower- and middle-income communities with the percentage of students qualifying for a free or reduced cost lunch ranging from 12% to 28%.

Recruitment and sampling included three stages. First, research assistants made brief announcements in all 10th and 11th grade classrooms in a given department (e.g., social studies, science) to describe the study and distribute consent packets. Students were asked to return the packets with a signed parental consent form if they were interested in participating in the study. Small incentives (e.g., key chains, stress balls, snacks) were provided to individual students who returned forms whether or not they were interested in participating in the project and to classrooms with the highest return rates. Return rates for the consent packets ranged from 50.4% to 62.6% across the schools. Second, a stratified random sample was selected from among those who provided parental consent to maximize the gender and ethnicity balance in the Time 1 (T1) survey. Third, students who completed T1 survey were further stratified across low and high scores on the Life Events Checklist to participate in follow-up assessments. The T2 and T3 surveys occurred three and six months after initial assessment, respectively. We administered our outcome of interest intervention preferences at T3 to the 2013-2014 cohort in order to inform services that we intended to provide to students in the following school years. Students received \$20 to \$25 gift cards for participation in each of the three assessment time points.

Given the focus on depression preventive interventions, we selected students with elevated internalizing symptoms on the Youth Self-Report (i.e., T-score ≥ 60 ; Achenbach & Rescorla, 2001) who completed our measures of interest at T3 survey. This resulted in a sample

of 104 students (41.9% of total sample at T3) for the analyses of intervention preferences. Thirty-six percent of the current sample were Vietnamese Americans, and 50.0% were females. Figure 1 shows the participant flow for the 2013-2014 cohort that resulted in our final analysis sample at T3.

Measures

Cultural values. *Interdependent self-construal.* Interdependent self-construal was measured using the modified Self-Construal Scale (SCS; Singelis, 1994). The modified measure assesses two self-construals. In the current study, we examined the interdependent self-construal scale, which focuses on connectedness of the person to situations and relationships with others. Adolescents rate on a 7-point Likert scale how much they agree or disagree with statements such as “It is important for me to maintain harmony within my group”. The SCS has shown good reliability and validity with both European American and Asian American youths (Norasakkunkit & Kalick, 2002; Singelis, 1994). Internal consistency was good for the interdependent self-construal subscale (overall sample: $\alpha = .76$; European Americans: $\alpha = .73$; Vietnamese Americans: $\alpha = .70$).

Family obligation values. Family obligation was measured using the Adolescents’ Attitudes toward Family Obligation scale (Fulgini, Tseng, & Lam, 1999). The measure assesses attitudes about the family associated with interdependent cultural contexts in several domains. The Current Assistance domain assesses the frequency with which adolescents assist their families with household tasks (e.g., “help take care of your brothers and sisters”). The Respect domain assesses the extent to which the adolescents respect and follow the wishes of family elders (e.g., “show great respect for your parents”). The Future Support domain assesses obligation to support the family in the future (e.g., “help your parents financially in the future”).

The current study used the total scale score. Internal consistency was strong (overall sample: $\alpha = .76$; European Americans: $\alpha = .87$; Vietnamese Americans: $\alpha = .80$).

Emotional restraint values. Emotional restraint was assessed using the six-item Emotional Restraint (ER) scale. The ER scale was developed for the present study based on a literature review and on the Emotional Self-Control subscale of the Asian American Values Scale Multidimensional (Kim, Li, & Ng, 2005), which has demonstrated reliability and validity for both European American and Asian American samples (e.g., Park & Kim, 2008). In the ER scale, participants are asked to rate on a 6-point Likert scale how much they agree or disagree with a series of statements describing restraint in emotional expression (e.g., “Showing emotion is a sign of weakness”). A principal axis exploratory factor analysis indicated that a single factor underlay the six-item scale. The construct validity of the ER scale was evaluated by assessing relations with avoidant coping, which is conceptually related to emotional restraint (Kashdan, Barrios, Forsyth, & Steger, 2006). We found significant positive relations between the ER scale and the Children’s Coping Strategies Checklist (Ayers, Sandier, West, & Roosa, 1996), for the overall sample ($r = .35$), European Americans ($r = .24$), and Vietnamese Americans ($r = .51$) ($ps \leq .05$). Internal consistency was satisfactory (overall sample: $\alpha = .79$; European Americans: $\alpha = .79$; Vietnamese Americans: $\alpha = .78$).

Risk factors. Interpersonal stress. Interpersonal stress was measured using a revised version of the Adolescent Life Events Questionnaire (ALEQ; Hankin & Abramson, 2002). This version of the ALEQ assesses the occurrence of 70 negative life events, including academic/achievement problems (e.g., “you didn’t make the honors roll when you wanted to”), friendship difficulties (e.g., “you had an argument with a close friend”), and family problems (e.g., “your parents put you down”). To examine interpersonal stress, we summed counts of

negative stressful events from the subscales of family problems and friendship difficulties, respectively. ALEQ subscales has been found to be a reliable and valid measure, including among Asian adolescents (Cohen et al., 2013). For these scales, we did not compute internal consistency estimates. Life event scales often have been conceptualized as representing formative rather than reflective factors (e.g., Miller, 1989), which means that scale items are not indicators of a latent factor but rather are combined to create a formative factor. High correlations between items of a formative scale generally are not expected, and thus Cronbach's alpha may be misleading as an indicator of reliability (Bollen, 1989).

Avoidant coping. Use of avoidant coping strategies was measured using a modified version of the Children's Coping Strategies Scale (CCSC; Ayers & Sandler, 1999). The modified 60-item scale assesses a number of cognitive, behavioral, and emotional-based coping strategies. The current study used items that reflect coping strategies aimed to suppress emotions (e.g., "I hid my emotions"), avoid problems (e.g., "I tried to stay away from the problem"), or stop thinking about the problem altogether (e.g., "I tried not to think about it") (Ayers, Sandler, West, & Roosa, 1996). The CCSC has shown good reliability and validity with Asian American youths (e.g., Chen, Weiss, Heyman, Cooper, & Lustig, 2010). Internal consistency was satisfactory for the subscale (overall sample: $\alpha = .82$; European Americans: $\alpha = .82$; Vietnamese Americans: $\alpha = .83$).

Intervention preferences. Participants were presented with descriptions of two empirically supported preventive interventions for depression: a) *Teen Talk* for IPT-AST and b) *Learning to BREATHE* (L2B) for mindfulness-based intervention. To reduce stigma commonly associated with depression (Kelly & Jorm, 2007; Calcar, Griffiths, & Christensen, 2011), the two interventions were presented as stress management programs that high schools offer to help

students deal with stress in their lives. Please see appendix for descriptions of the two preventive interventions that were presented to participants in the current study. Based on the descriptions, participants were asked “if you wanted to take a stress management course, and could take one of these two, which would you choose”?

Analyses

Using a cross-sectional design, we conducted three sets of binary logistic regressions to examine the main effect of a) demographic variables (i.e., race/ethnicity and gender), b) adolescent risk factors (i.e., interpersonal stress and avoidant emotion regulatory strategies), and c) cultural values (i.e., interdependent self-construal, family obligation and emotional restraint) on intervention preference for L2B versus IPT-AST. Further, we conducted moderation analyses to determine whether the effects of risk factors and cultural values on preferences differed by race/ethnicity. All analyses were conducted using Stata 13.1 (StataCorp, 2013).

Results

Descriptive Analyses

Table 1 shows demographics of students who scored in the normal (i.e. T-score less than 60) versus clinical range (i.e., T-score greater than or equal to 60) of the Youth Self-Report scale for internalizing symptoms. No racial/ethnic or gender differences emerged across the two clinical profiles (Ethnicity: $\chi^2(1) = 2.82, p = .09$; Gender: $\chi^2(1) = 1.99, p = .16$). Given our interest in depression prevention preferences, all subsequent analyses focused on students with elevated internalizing symptoms.

Table 2 shows the means and standard deviations of adolescent risk factors (i.e., family stress, peer stress, avoidant coping strategies) and cultural values (i.e., interdependent self-construal, family obligation, and emotional restraint), and frequency for intervention preferences

among students with elevated internalizing symptoms. Vietnamese Americans and European Americans showed similar attitudes toward the two empirically supported depression interventions; in both groups, more youth selected L2B as their preferred treatment (61.8% of European Americans, 55.3% of Vietnamese Americans). The two racial/ethnic groups were also similar on most measures of risk factors and cultural values. The only significant difference that emerged was interdependent self-construal; Vietnamese American adolescents reported higher level of interdependence than European Americans, $t(101) = -4.01, p < .001$, Cohen's $d = .84$.

Table 3 shows correlations between adolescent risk factors, cultural values and preference for L2B versus IPT-AST (a dummy-coded variable with 0 = L2B and 1 = IPT-AST) among youth with elevated internalizing symptoms. Among cultural values, only emotional restraint was negatively associated with preference for IPT-AST (versus L2B). Among risk factors, family stress was positively correlated with preference for IPT-AST while avoidant coping had a negative association.

Predictors of Intervention Preferences

We conducted three sets of binary logistic regressions to examine the effects of demographic variables, cultural values, and individual risk factors on the binary variable of intervention preference. As shown in Model 1 of Tables 4 and 5, neither race/ethnicity nor gender was related to preference (Ethnicity: OR = 1.38, SE = .58, $p = .44$, 95% CI [.61 3.12]; Gender: OR = 1.41, SE = .57, $p = .39$, 95% CI [.64 3.11]).

When cultural values were added as predictors of intervention preference, only emotional restraint was significantly associated with preference, OR = .89, SE = .04, $p < .01$, 95% CI (.82 .97). For every one unit of increase in emotional restraint, adolescents were .89 times as

likely to choose IPT-AST (versus L2B). In other words, as emotional restraint increased, likelihood of choosing IPT decreased and likelihood of choosing L2B increased. Interdependent self-construal and family obligation were unrelated to intervention preference (Interdependent self-construal: OR = .99, SE = .05, $p = .79$, 95% CI [.91 1.08]; Family obligation: OR = 1.40, SE = .52, $p = .37$, 95% CI [.67 2.91]). These results are shown in Model 2 of Table 4.

In the assessment of the association between risk factors and intervention preference (see Table 5 Model 2), we found that family stress was significantly linked to preference for IPT-AST (versus L2B), OR = 1.14, SE = .07, $p = .02$, 95% CI (1.02 1.28). As family stress increased, so did likelihood of choosing IPT-AST. Avoidant coping was also found to be significant predictor of intervention preference, OR = .94, SE = .02, $p = .01$, 95% CI (.89 .99). For every one unit of increase in avoidant coping, adolescents were .94 times as likely to choose IPT-AST (versus L2B). In other words, as avoidant coping increased, likelihood of selecting IPT decreased and likelihood of selecting L2B increased. There was no significant link between peer stress and intervention preference, OR = 1.10, SE = .38, $p = .78$, 95% CI (.56 2.15).

To examine whether race/ethnicity moderated the link between preference and a) cultural values and b) risk factors, we examined the statistical products of a) Interdependent Self-Construal x Ethnicity, Family Obligation x Ethnicity, and Emotional Restraint x Ethnicity, and b) Family Stress x Ethnicity, Peer Stress x Ethnicity, and Avoidant Coping x Ethnicity in two separate logistic regressions (see Model 3 in Tables 3 and 4, respectively). Analyses revealed a significant interaction between avoidant coping and ethnicity, OR = .85, SE = .06, $p = .02$, 95% CI (.74 .98). As shown in Figure 2, for Vietnamese Americans, probability of choosing IPT-AST (versus L2B) decreased as avoidant coping increased. However, for European Americans, intervention preference did not change at different levels of avoidant coping. No other

interactions between ethnicity and risk factors (Family stress: OR = 1.12, SE = .15, $p = .41$, 95% CI [.85 1.47]; Peer stress: OR = 1.06, SE = .77, $p = .94$, 95% CI [.25 4.45]) or cultural values were significant (Interdependent self-construal: OR = 1.01, SE = .11, $p = .94$, 95% CI [.82 1.24]; Family obligation: OR = .93, SE = .83, $p = .94$, 95% CI [.16 5.30]; Emotional restraint: OR = .92, SE = .04, $p = .12$, 95% CI [.83 1.02]).

Discussion

Given the increasing emphasis on the importance of accommodating client preferences in health and mental health care decisions (Swift et al., 2013; Jaycox et al., 2006), we aimed to characterize adolescent attitudes toward specific preventive interventions for youth depression and to identify factors associated with these preferences. Specifically, we examined how race/ethnicity, cultural values, and risk factors affected preference for interpersonal therapy versus mindfulness-based intervention among Vietnamese American and European American adolescents with elevated internalizing symptoms.

We found that youth intervention preference was aligned with their indicated risk profiles. Adolescents who reported greater interpersonal conflict, specifically within their family, were more likely to choose IPT-AST, a program that addresses depression through the reduction of interpersonal difficulties (Young et al., 2006). In contrast, adolescents who engaged in more avoidant coping strategies such as emotion suppression were more likely to choose L2B, a program that addresses depressive symptoms by teaching healthy engagement with thoughts and emotions (Broderick, 2013; Hayes & Feldman, 2004). To our knowledge, this is the first study to examine the association between indicated needs and adolescent treatment preference. Our findings suggest that youth, whose decision-making abilities have been heavily debated (e.g., Halpern-Felsher & Cauffman, 2001, Gardner & Steinberg, 2005), may be capable of making

informed decisions about their own mental health treatment. Unlike past research that measured adolescents' decision-making skills in hypothetical scenarios concerning other individuals, the current study directly asked participants to choose a treatment for themselves. When the question becomes personally relevant and clinically important, youth may be able to more accurately assess the risks and benefits of the options and make a choice that reflects their current needs.

Indeed, emerging research in pediatric care suggests that youth want to be involved in their medical treatment decisions and have the capacity to do so (Miller & Harris, 2012; Coyne, 2006; Kelsey, Abelson-Mitchell, & Skirton, 2007; Alderson, Sutcliffe, & Curtis, 2006). Our finding that adolescents with elevated clinical symptoms chose interventions aligned with their specific risks also alleviates the concern that youth with emotional disturbance may not be able to make appropriate decisions (Crickard, O'Brien, Rapp, & Holmes, 2010), at least when multiple options for depression prevention are offered to them. More research is needed to determine whether youth are capable of making appropriate mental health decisions for other concerns (e.g., externalizing problems and more serious mental illnesses) when specific empirically supported interventions are not presented to them. Furthermore, future research is needed to understand whether youth actually fare better when they receive interventions that target their specific risk profiles and align with their preferences.

Stressful events in the family domain were related to a preference for IPT-AST, but stressors in the peer domain had no association with adolescent attitudes toward the interventions. Although both constructs tap into interpersonal functioning in the two domains important to adolescent development (Smetana, Campione-Barr, & Metzger, 2006), our results suggest that peer and family stress are qualitatively distinct. Indeed, past studies show that they have different impact on psychopathology (e.g. Grant et al., 2006) and coping (e.g., Jaser et al.,

2007). While youth tend to use more disengagement coping strategies such as walking away or giving in when conflicts arise with family members, they are more likely to resolve problems with peers through active coping strategies such as negotiation and compromises (Griffith, Dubow, & Ippolito, 2000; Smetana et al., 2006; Laursen, Finkelstein, & Betts, 2001). These differences in coping may explain the higher rates of negative events in family domain and the low occurrence in the peer domain in the current study. Given their use of active coping with friends, adolescents may be more satisfied with their peer relationships and thus find treatment that focus on improving interpersonal functioning to be unnecessary. In contrast, they may be more dissatisfied with how they resolve problems with their family members and thus find IPT-AST useful.

Race/ethnicity alone was not significantly linked to intervention preference. Instead, we found that race/ethnicity interacted with the risk factor of avoidant coping to influence preference toward mindfulness-based intervention versus interpersonal therapy. As avoidant coping increased, Vietnamese American adolescents were more likely to prefer L2B over IPT-AST. In contrast, European Americans' preference remained stable irrespective of their coping profile. The racial/ethnic difference may be explained by cultural differences in normative coping. While individuals from individualistic cultures such as European Americans tend to engage in primary control coping strategies that deal directly with the environment or stressor, individuals from collectivistic cultures such as Vietnamese Americans prefer secondary control coping strategies that focus on controlling or adapting the self (Chun, Moos, & Cronkite, 2006; Weisz et al., 1984). The preference for modulating one's own internal states rather than changing the environment is aligned with mindfulness-based practices. As such, as avoidant behaviors

increase, Vietnamese Americans may find L2B more appealing whereas European American youth preferences are not determined by this factor.

In our assessment of cultural correlates of preference, we found that emotional restraint was significantly related to preference for L2B. While the notion of attuning to and engaging with one's internal states may seem dissonant with the value of controlling and minimizing one's emotions in favor of group harmony, our results suggest quite the opposite. As adherence to emotional self-control grew, adolescents across both racial/ethnic groups found mindfulness-based practices increasingly appealing. It is possible that the habitual practice of controlling and suppressing emotions, particularly unwanted ones, have contributed to a surge in negative cognition and affect (Aldao et al., 2010). Adolescents socialized in this manner of affect regulation may perceive that a more balanced engagement with emotions may be an effective route to manage their distress, as described in the intervention description.

Interestingly, neither interdependent self-construal nor family obligation was associated with intervention preference. Although the ultimate goal of strengthening social relationships in interpersonal therapy aligns with interdependence values, the process of achieving such outcome requires strategies that may appear disruptive to group harmony such as asserting one's needs during communication and taking appropriate social risks (Markowitz & Weissman, 2004). As such, it is possible that the desire for improved interpersonal relationships and the goal to preserve social harmony resulted in a net null effect on preference. Thus far, only a limited number of studies have examined the cultural applicability of interpersonal therapy for adolescents (e.g., Mufson et al., 2014; Rossello, Bernal, & Rivera-Medina, 2008). More research is needed in the future to determine specific components of treatment that are appealing and challenging for youth from collectivistic cultures.

Taken together, our findings showed that ethnicity alone was not a determining factor in adolescent preferences toward specific evidence-based interventions. Instead, help-seeking attitudes and behaviors for ethnically diverse youth must be considered in the context of risk factors and cultural values. Indeed, models of help-seeking are paying greater attention to the complex relationship between need and subjective norms such as cultural expectations and beliefs (Guo et al., 2015; Cabassa & Zayas, 2007; Cauce et al., 2002). Given the lack of concordance between need for and use of mental health services, particularly among ethnic minority youth, understanding what drives adolescent preferences toward treatment requires assessment beyond mere racial/ethnic group labels. Further, Zane and colleagues (2005) argued that while ethnicity is important to consider in treatment experiences and outcomes, it ultimately is a distal and immutable factor. In contrast, culturally-based attitudes and values are more proximal and amenable to change. Rather than seeking merely ethnicity match in treatment, it may be more beneficial for therapists to explore differences in their attitudes and expectations about treatment with their clients, and when appropriate, modulate these discrepancies to improve engagement and therapeutic experience.

There are several important limitations to consider in the current study. First, we chose to assess risk factors and cultural values concurrently with intervention preference. Our cross-sectional design enabled us to examine adolescents' present needs and beliefs, but it prevented us from making conclusions about cause and effect. Second, we assessed intervention preference by presenting youth with two specific treatments and asking them to choose one of the two options. This binary choice is commonly used to measure client preferences (e.g., Bradley et al., 2009; Jaycox et al., 2006). However, future studies may wish to examine attitudes using dimensional or free-response measures in order to capture greater variability in preferences. Finally, it was

beyond the scope of the current study to study the relationship between attitudes and actual use of mental health services. Studies suggest that client preferences are related to treatment initiation and adherence (e.g., TenHave et al., 2003). However, it is possible that attitudes do not translate directly to initiation or engagement in desired treatment, particularly given that youth entry into treatment requires parental recognition of mental health need and support for the intervention (e.g., Guo et al., in press, Logan & King, 2001; Zwaanswijk, Van Der Ende, Verhaak, Bensing, & Verhulst, 2005). Likewise, more research is needed to assess the predictive validity of preference versus indication on treatment outcome. The current study found a significant link between indicated need and preference for specific interventions, but it is unclear whether youth will fare better receiving interventions based on their specified indication or preference.

Notwithstanding these limitations, the current study is the first to examine adolescent preferences for specific empirically supported depression interventions among an ethnically-diverse and clinically at-risk sample of adolescents. In the advent of client-centered care, our study offers empirical evidence for youth to become more involved in their own mental health decision-making. In our sample, adolescents across racial/ethnic groups not only demonstrated a good understanding of their own needs but also held values that are important to consider for treatment engagement. From a developmental perspective, adolescents have much to gain when they are able to share their perspectives during decision-making with parents and providers, including improved self-esteem, successful transition into adulthood, and early positive interactions with mental health treatment that will influence help-seeking behaviors in the future (Costello, 2003; Huffine, 2005; Modi et al., 2012; Jones, DeMore, Cohen, O'Connell, & Jones, 2008).

Table 3-1. Characteristics of youth with normal vs. elevated scores of internalizing symptoms

	Normal range (n = 144)		Elevated scores (n = 104)		Chi-square	<i>p</i>
	n	%	n	%		
Ethnicity					2.82	0.09
European American	107	74.3	67	64.4		
Vietnamese American	37	25.7	37	35.6		
Gender					1.99	0.16
Female	59	41.0	52	50.0		
Male	85	59.0	52	50.0		

Table 3-2. Racial/ethnic differences in cultural values, risk factors, and intervention preferences among students with elevated internalizing symptoms

Cultural values	European American (n = 67)		Vietnamese American (n = 37)		Analysis results	
	M (SD)	n (%)	M (SD)	n (%)	Significance test	Cohen's d
Interdependent construal	27.74 (5.35)		31.95 (4.62)		$t(101) = -4.01^{***}$	d = .84
Family obligation	2.85 (.68)		3.09 (.56)		$t(102) = -1.81$	d = .39
Emotional restraint	21.90 (5.51)		23.59 (6.08)		$t(102) = -1.45$	d = .29
Risk factors						
Family stress	5.43 (4.06)		6.21 (3.95)		$t(102) = -.96$	d = .19
Peer stress	.28 (.57)		.39 (.72)		$t(102) = -.91$	d = .17
Avoidant coping	44.91 (8.61)		46.19 (9.47)		$t(100) = -.70$	d = .14
Intervention preference						
L2B		42 (61.8)		21 (55.3)		
IPT-AST		26 (38.2)		17 (44.7)		

Note: L2B is a mindfulness-based intervention known as *Learning to BREATHE*; IPT-AST is an interpersonal therapy known as *Interpersonal Psychotherapy-Adolescent Skills Training*

Table 3-3. Correlations among intervention preference, cultural values and adolescent risk factors

Variable	1	2	3	4	5	6	7	8	9
1. Intervention preference	-								
2. Ethnicity	.06	-							
3. Gender	.07	-.03	-						
4. Interdependent construal	.01	.30***	-.12*	-					
5. Family obligation	.13	.21***	.08	.31***	-				
6. Emotional restraint	-.30**	.06	-.10	.14*	-.02	-			
7. Family stress	.23*	.03	-.01	.08	.06	.14*	-		
8. Peer stress	.10	.04	-.01	.09	.01	.12	.51***	-	
9. Avoidant coping	-.21*	.08	.04	.13*	.03	.38***	.14*	-.01	-

Note. Intervention preference (0=L2B 1=IPT-AST); Ethnicity (0=European American 1=Vietnamese American); Gender (0=Male 1=Female); * $p < .05$. ** $p < .01$. *** $p < .001$

Table 3-4. Logistic regressions of demographics and cultural values on intervention preferences

Variables	Intervention preference (0 = L2B; 1 = IPT-AST)			
	<i>OR</i>	<i>SE</i>	<i>p</i>	95% CI
Model 1: Demographics				
Race/ethnicity	1.38	0.58	0.44	[.61 3.12]
Gender	1.41	0.57	0.39	[.64 3.11]
Model 2: Cultural values				
Race/ethnicity	1.60	0.78	0.33	[.62 4.18]
Gender	1.11	0.48	0.81	[.48 2.60]
Interdependent construal	0.99	0.05	0.79	[.91 1.08]
Family obligation	1.40	0.52	0.37	[.67 2.91]
Emotional restraint	0.89	0.04	<.01	[.82 .97]
Model 3: Ethnicity x Cultural values				
Race/ethnicity	1.78	0.97	0.29	[.62 5.17]
Gender	1.18	0.52	0.71	[.50 2.80]
Interdependent construal	0.98	0.05	0.75	[.88 1.09]
Family obligation	1.51	0.66	0.35	[.64 3.58]
Emotional restraint	0.92	0.05	0.12	[.83 1.02]
Ethnicity x Interdependent construal	1.01	0.11	0.94	[.82 1.24]
Ethnicity x Family obligation	0.93	0.83	0.94	[.16 5.30]
Ethnicity x Emotional restraint	0.92	0.04	0.12	[.83 1.02]

Table 3-5. Logistic regressions of demographics and risk factors on intervention preferences

Variables	Intervention preference (0 = L2B; 1 = IPT-AST)			
	<i>OR</i>	<i>SE</i>	<i>p</i>	95% CI
Model 1: Demographics				
Race/ethnicity	1.38	0.58	0.44	[.61 3.12]
Gender	1.41	0.57	0.39	[.64 3.11]
Model 2: Risk factors				
Race/ethnicity	1.40	0.64	0.46	[.57 3.43]
Gender	1.30	0.59	0.56	[.54 3.14]
Family stress	1.14	0.07	0.02	[1.02 1.28]
Peer stress	1.10	0.38	0.78	[.56 2.15]
Avoidant coping	0.94	0.02	0.01	[.89 .99]
Model 3: Ethnicity x Risk factors				
Race/ethnicity	1.31	0.67	0.59	[.48 3.55]
Gender	1.40	0.67	0.48	[.55 3.59]
Family stress	1.12	0.16	0.41	[.85 1.47]
Peer stress	1.05	0.48	0.92	[.42 2.59]
Avoidant coping	0.98	0.03	0.57	[.92 1.04]
Ethnicity x Family stress	1.12	0.15	0.41	[.85 1.47]
Ethnicity x Peer stress	1.06	0.77	0.94	[.25 4.45]
Ethnicity x Avoidant coping	0.85	0.06	0.02	[.74 .98]

Figure 3-1. Participant flow from T1 survey to final analysis sample

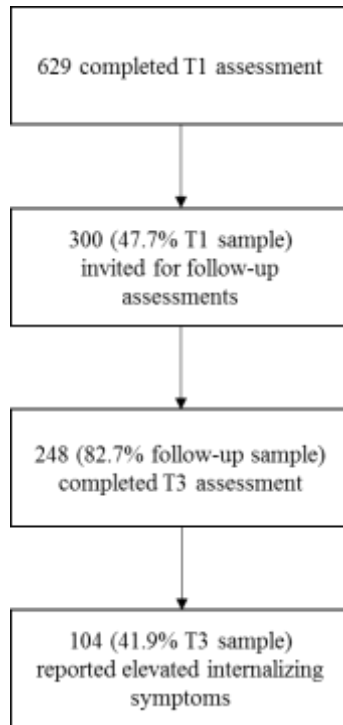
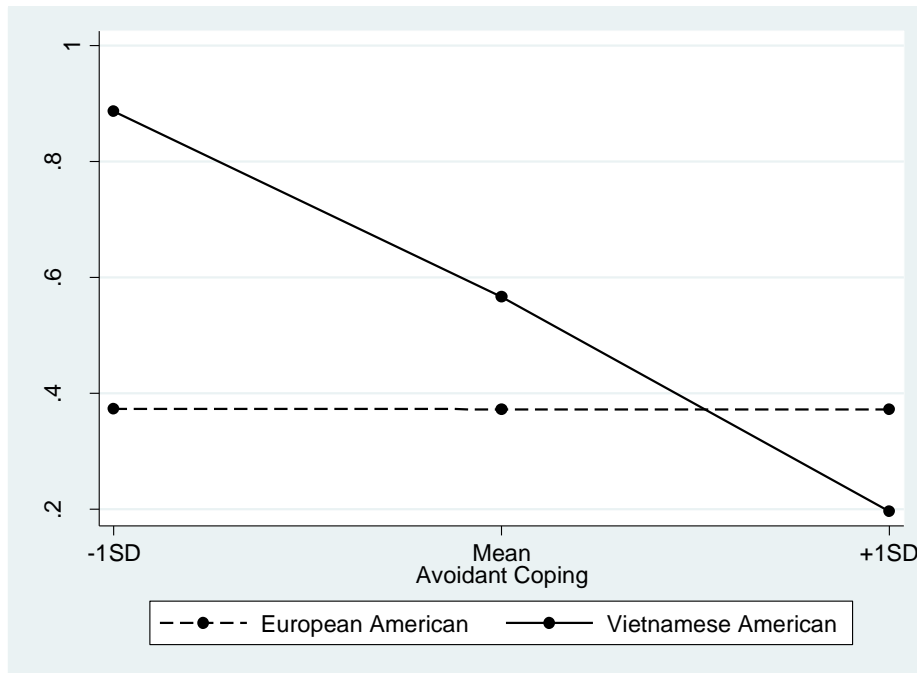


Figure 3-2. Interaction between race/ethnicity and avoidant coping on predicted probability of preference for IPT-AST



Appendix: Description of Learning to BREATHE (mindfulness-based intervention) and Teen Talk (interpersonal therapy) presented to participants

High schools sometimes offer stress management courses to help their students deal with the stress in their lives. Below are descriptions of two different stress management programs. Please read each description, then answer the questions that follow.

Learning to BREATHE

When teens are stressed, they sometimes may cope in ways that are unhelpful. Some teens try to avoid or suppress unpleasant emotions such as anger or fear, which makes them feel better temporarily but often makes things worse in the long run. Other teens respond to unpleasant feelings by becoming preoccupied and constantly worrying about their stress and problems. Learning to Breathe (L2B) is a mindfulness-based program that helps teens move away from these extreme reactions towards a more healthy and balanced stress management style. Mindfulness involves becoming aware of what is happening in the present moment without becoming overly preoccupied, or trying to push it away. In L2B, teens learn mindfulness techniques for emotion regulation that include being aware of and paying attention to your emotions, understanding and labeling emotions, and managing or modifying emotional reactions so that you can meet your important goals in life. Teens will learn to use mindfulness techniques in their daily lives through discussion, activities, and opportunities to practice mindfulness skills in a group of other teens.

Teen Talk

As students transition to adolescence, managing stress in relationships with family and friends becomes more complicated yet more important. Positive relationships can promote health and wellness, while conflict and social isolation can place teens (and adults) at risk for a number of negative outcomes. Teen Talk is a social skills based program where teens learn to manage and reduce problems in their relationships. Students first meet individually with a counselor to identify the strengths and challenges in their important relationships so that they can set their own goals for the program. Then students meet in a small group where they learn skills for reaching their relationship goals. The teens learn communication and interpersonal skills through discussion, activities, and practice with other students in the group. Once students understand the skills, they try them out with different people in their lives, practicing first in the group and then at home.

GENERAL DISCUSSION

Despite the increasing risk of emotional and behavioral problems during adolescence, majority of youth with mental health need, particularly ethnic minority youth, do not seek help (Kieling et al., 2011). To understand determinants of these high levels of unmet need, this dissertation examined the interplay between traditional indicators of help-seeking (e.g., perceived need and race/ethnicity) and the larger sociocultural context surrounding adolescents from two ethnocultural groups (i.e., Vietnamese Americans and European Americans).

Consistent with previous research, we found racial/ethnic disparities in help-seeking behaviors and attitudes. In Study 1, Vietnamese American adolescents were less likely than European Americans to access formal providers for their mental health needs. In Study 2, Vietnamese American youth rated the support they obtained from others as less helpful relative to their European American peers. These help-seeking patterns could not be explained by differences in mental health need alone as Vietnamese American youth consistently reported higher levels of emotional and behavioral problems than European Americans.

Our assessment of the sociocultural correlates of help-seeking highlighted the potential of several engagement strategies for youth in general, and for ethnic minority adolescents in particular. In Study 2, youth rated multiple sources of support in their social network as helpful in addressing their emotional needs (e.g., parents, peers, and teachers). Given that adolescents are more likely to access these informal sources than formal providers (Jorm & Wright, 2007), training and support for these first responders could improve the detection of youth mental health problems and linkage to appropriate services (Wyman et al., 2008; Frazier et al., 2007). For ethnic minority adolescents, peers may play a particularly effective but currently understudied role in the process of gatekeeping. In Study 2, Vietnamese Americans not only sought support

more frequently from friends and romantic partners than adults, they were also more satisfied with the help they received from peers than adults. More research is needed to examine whether the supportive role of peers can be harnessed to help reduce racial/ethnic disparities in treatment initiation and retention.

In addition to key social supports, we also identified family obligation and emotional restraint as important cultural values to consider in the help-seeking pathway. Although both constructs tap into the interdependent goals of maintaining social harmony and prioritizing group needs over personal ones (e.g., Fuligni et al., 1999; Hall et al., 2011), their impact on youth willingness to seek mental health support varied depending on the specific help-seeking outcomes. A strong sense of responsibility to the family had a negative effect on youth recruitment of formal support when family stress arose (Study 1), but it positively influenced youth satisfaction ratings of the support they obtained (Study 2). In contrast, an orientation to restrain the expression of emotions had a negative effect on youth satisfaction with the support they recruited (Study 2); however, emotion restraint values positively influenced adolescent preference for an intervention focused on the healthy engagement of emotions (Study 3). The distinctions between family obligation and emotional restraint highlighted the specificity of cultural values as influences upon the help-seeking process. Depending on the timing and source of support (e.g., before versus after support had been mobilized, informal versus formal support), relational concerns act as either a facilitator or barrier to help-seeking.

Although the influence of family obligation and emotional restraint varied, both cultural values are important to consider when engaging youth in mental health services. Compared to race/ethnicity, these culturally-based values are more proximal predictors of preferences, making them ideal targets in the development of culturally responsive interventions. Thus, instead of

focusing on ethnic match which has only shown limited success in promoting treatment engagement (Cabral & Smith, 2011), it may be more beneficial when providers explore clients' cultural norms and beliefs, and collaborate on treatment approaches that take into account clients' preferences (Sue, Zane, Hall, & Berger, 2009; Bernal, 2006). Several empirically supported interventions already exist that have the capacity to attend to the cultural considerations identified in this dissertation. For instance, mindfulness-based therapies, which teach healthy engagement with thoughts and emotions, may be particularly useful for youth who are prone to withhold or suppress their feelings. Likewise, youth who value strong family ties may find therapies that focus on the improvement of relationships and the sensitive management of conflicts (e.g., interpersonal therapy, family-focused therapies) rewarding and effective in meeting their interdependent goals.

Given that many studies have documented the imperfect association between need and use of mental health services including the current dissertation, it may be tempting to assume that adolescents have a limited understanding of their own mental health needs. However, we found that adolescents preferred interventions that would target their needs and risk profiles. In Study 3, youth who endorsed more avoidant coping showed interest in an intervention that addresses maladaptive emotion regulation (i.e., mindfulness-based therapy) while those with greater familial stressors preferred an intervention that targets conflictual or unsatisfying interpersonal relationships (i.e., interpersonal therapy). Although no other study has examined the link between treatment indications and preferences among adolescents, our findings are in line with the current movement toward client-centered care (Swift et al., 2013)

The three studies in this dissertation showed that adolescents have a good understanding of their own mental health need and that their help-seeking and treatment preferences are related

to their cultural norms and values. However, in order to access and benefit from appropriate mental health services, they need greater assistance from important social supports such as parents, peers, and formal providers who can take their beliefs and expectations into consideration. Early positive interactions with gatekeepers and mental health treatment providers are linked to improved outcomes as adults, more positive attitudes toward help-seeking in the future, and ultimately lowered costs to society (Patel et al., 2007).

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